The KEYSTONE

The ORGAN of the JEWELRY & OPTICAL TRADES

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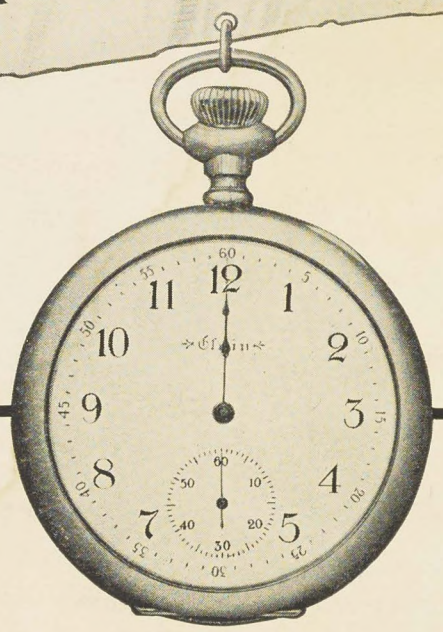
The Balance of Business

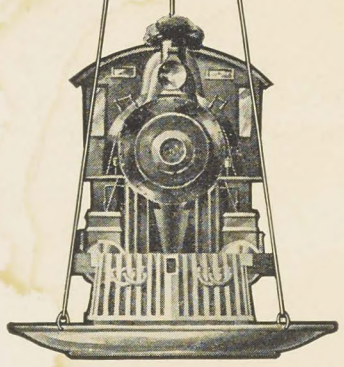


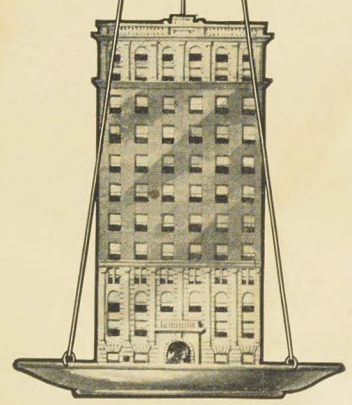
THE

ELGIN

WATCH

Regulates the Business of The World





Indispensable to modern life, the Elgin Watch is ever in increasing demand—and the balance of business goes to the store that carries a full stock of Elgin Watches.

See Jobbers' list for prices or write the Company

Every dealer is invited to send for the Elgin Art booklet, "Timemakers and Timekeepers," illustrating the history and development of the watch

ELGIN NATIONAL WATCH COMPANY

Factories, ELGIN, Illinois, U.S.A.
General Offices, 131 Wabash Ave., Chicago

NEW YORK OFFICE, 11 John Street
SAN FRANCISCO OFFICE, 206 Kearny St.

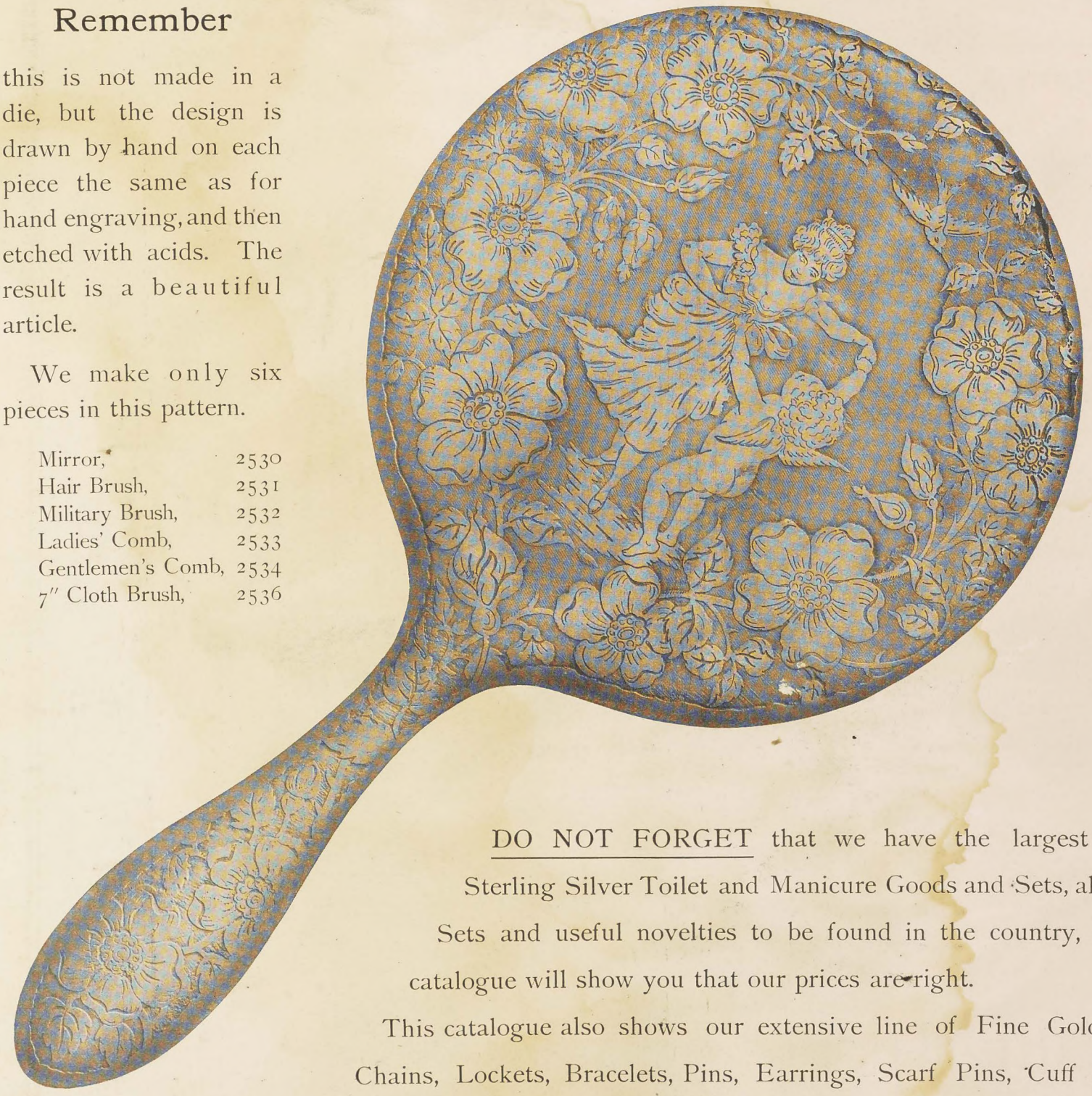
Theodore W. Foster & Bro. Co.

Remember

this is not made in a die, but the design is drawn by hand on each piece the same as for hand engraving, and then etched with acids. The result is a beautiful article.

We make only six pieces in this pattern.

Mirror,	2530
Hair Brush,	2531
Military Brush,	2532
Ladies' Comb,	2533
Gentlemen's Comb,	2534
7″ Cloth Brush,	2536



DO NOT FORGET that we have the largest line of Sterling Silver Toilet and Manicure Goods and Sets, also Desk Sets and useful novelties to be found in the country, and our catalogue will show you that our prices are right.

This catalogue also shows our extensive line of Fine Gold Filled Chains, Lockets, Bracelets, Pins, Earrings, Scarf Pins, Cuff Buttons, Waist Sets and Hair Chain Mountings.

Manufacturing Jewelers and Silversmiths

100 Richmond Street PROVIDENCE, R. I.

How easy it is to Rake in the Money with our popular LINE

THE KELLER JEWELRY MFG Co
64 Nassau St. New York.

Copyright 1902, By Burr McIntosh Studio.

MANUFACTURERS OF

FINE GOLD JEWELRY, Brooches, Cuff Buttons, Scarf Pins, Lockets, Fobs, Tie Clasps, Etc.

An Invitation

We are quite sure it would be worth your while to send us a trial order. You may find that we carry a better selection of goods and give quicker service than houses who must divide their attention among many different lines—we handle only Watches and Chains. You may find that we are probably the best house, all things considered, for your needs in Watches and Chains in the busy season which looms ahead. Will you try us, as many other new customers are trying us? They find that we "make good"—so will you.

The Non-Retailing Co.

Jobbers in Watches and Chains, Lancaster, Pa.

---

2 Tulpstraat
AMSTERDAM

ESTABLISHED 1866

12 MAIDEN LANE (one flight up)
P. O. Box 1625 NEW YORK

Lissauer & Company

MANUFACTURERS OF

Gold and Filled Watch Cases
Gold and Plated Jewelry

WHOLESALE DEALERS IN

Elgin and Waltham Movements
New England Watches

IMPORTERS OF

DIAMONDS AND PEARLS (Loose and Mounted)

Our imports of DIAMONDS are *direct* from the cutters at Amsterdam, and we can therefore offer you *substantial inducements*

ORDERS ARE SOLICITED EITHER DIRECT OR THROUGH OUR TRAVELERS

Selection packages sent to responsible jewelers

Our goods are insured while in transit

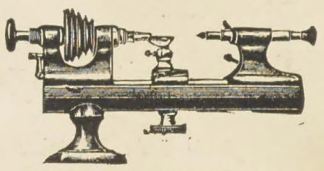
HARVEST-TIME

You should be ready for your share of the fall harvest of trade—and all indications and reports point to the belief that it will be a big one.

Be prepared for your customers with the proper tools and materials to take the best care of their work.

Our Lathes and Attachments are all of high standard. Even the cheapest is durable, serviceable and reliable. Our stock of Bench Lathes and Attachments and Watchmakers' Tools is one of the largest and most diversified in the country.

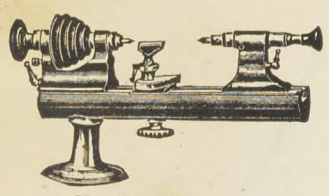
We can always take care of your orders and make prompt shipments. We answer inquiries at once and are glad to give any information or quotation desired.



Webster-Whitcomb Lathe.

With 10 Chucks	. .	$35.00
" 17 "	. . .	40.25
" 22 "	. . .	44.00
" 42 "	. . .	59.00

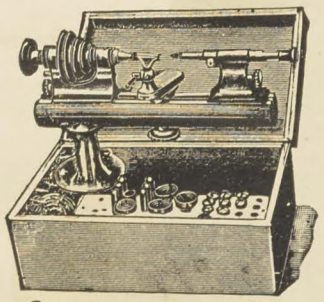
From these prices there is a cash discount which we will quote on request. W.-W. Lathes are standard for quality the world over.



Moseley Lathe No. 2.

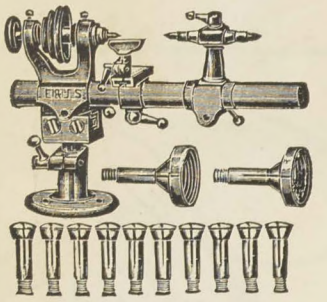
With 10 Chucks	. .	$35.00
" 17 "	. . .	40.00
" 22 "	. . .	44.00
" 42 "	. . .	59.00

Write for cash discount and notice the further reduction in list price. The name "Moseley" stands for the very highest grade in watchmakers' tools.



Gem Lathe Outfit Complete,
$21.15 net cash.
14 Chucks, 6 Cement Brasses and Belting.

There is no better lathe sold for the price than our "Gem." Every one is warranted true or you can have your money back.

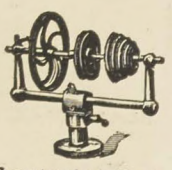


Geneva Lathe Outfit Complete,
$15.00 net cash.
Packed in wood box same as Gem Lathe.
14 Chucks, 8 Cement Brasses and Belting.

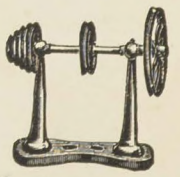
Our Geneva lathes are strictly first quality and have index and latch.

No. 15.
Swing Foot-Wheel.
Each, $5.15 net.

Foot-Wheel No. 1.
Each, $2.15 net.



Countershaft No. 9.
N. P., each, $2.58 net.



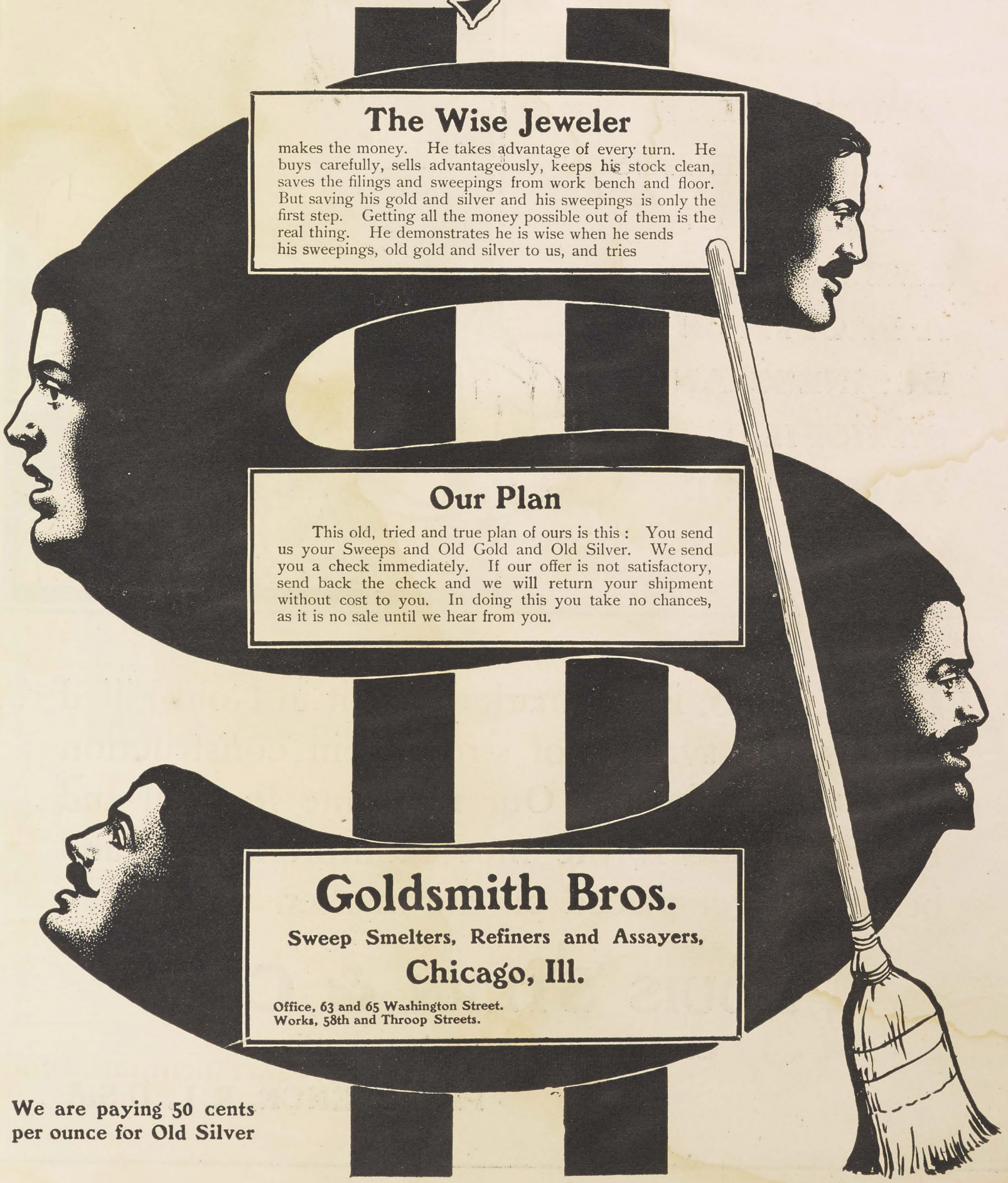
Countershaft No. 12.
N. P., each, 94c. net.

DURING THE BUSY SEASON we never neglect the small material orders which are always wanted in a hurry. We fill rush orders promptly and correctly.

Give us a trial if you are not already on our list of customers.

E. & J. SWIGART, Cincinnati, Ohio

Money Talks



The Wise Jeweler

makes the money. He takes advantage of every turn. He buys carefully, sells advantageously, keeps his stock clean, saves the filings and sweepings from work bench and floor. But saving his gold and silver and his sweepings is only the first step. Getting all the money possible out of them is the real thing. He demonstrates he is wise when he sends his sweepings, old gold and silver to us, and tries

Our Plan

This old, tried and true plan of ours is this: You send us your Sweeps and Old Gold and Old Silver. We send you a check immediately. If our offer is not satisfactory, send back the check and we will return your shipment without cost to you. In doing this you take no chances, as it is no sale until we hear from you.

Goldsmith Bros.

Sweep Smelters, Refiners and Assayers,

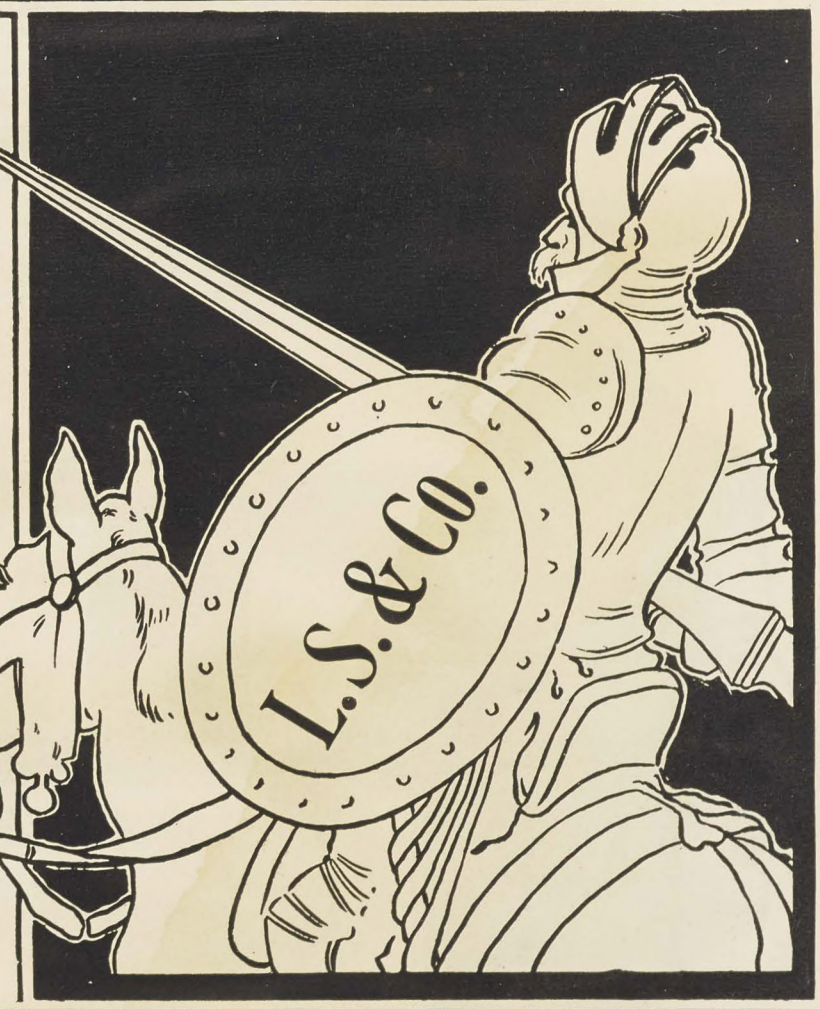
Chicago, Ill.

Office, 63 and 65 Washington Street.
Works, 58th and Throop Streets.

We are paying 50 cents per ounce for Old Silver

We Protect The Trade

MERIT IN THE
MAKING MEANS
SECURITY IN
THE SELLING--
A PROFITABLE
BUSINESS AND
SATISFIED
PATRONAGE



L. S. & Co. is the mark of merit in Gold Filled Chains, the symbol of strength in construction and style in finish. Our new line for Fall and Holiday trade is the most comprehensive and beautiful ever placed on the market.

LOUIS STERN & CO.

Chainmakers *and* Silversmiths

PROVIDENCE, R. I., U.S.A.

HAVE YOU TRIED

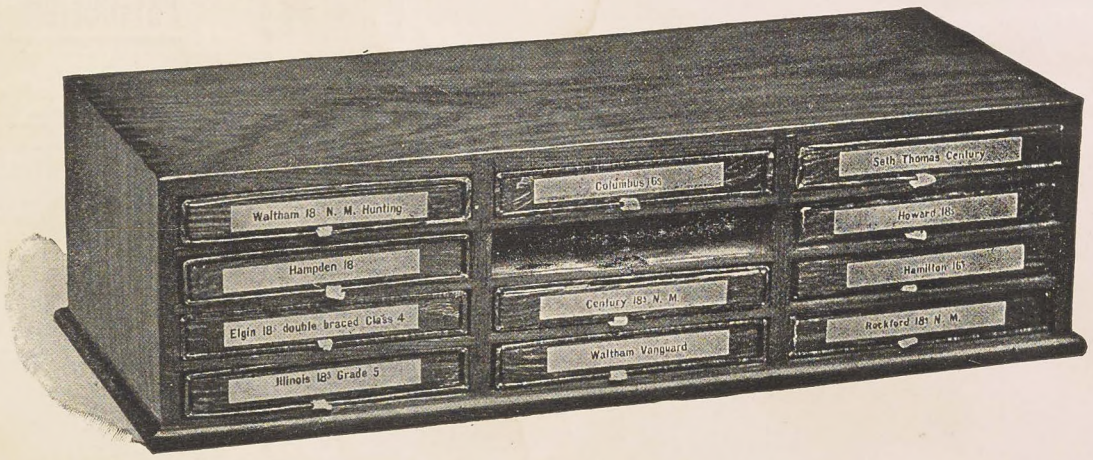
The "Longeval" Mainspring

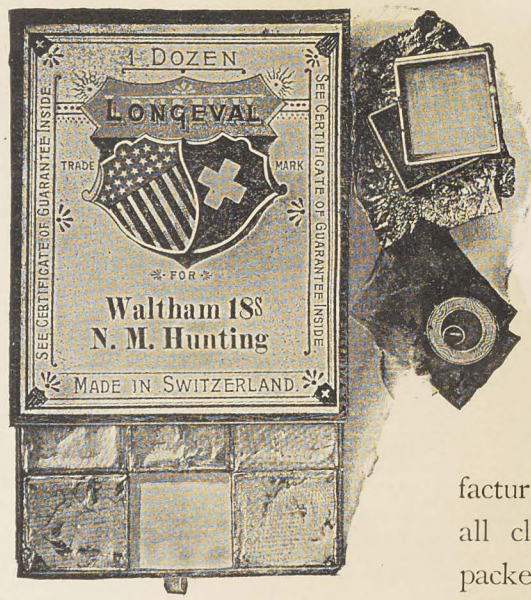
FOR AMERICAN WATCHES?

This handsome Oak Cabinet furnished gratis with every order for 1 gross of

"Longeval"

mainsprings. The cabinets are constructed on the principle of the sectional bookcase—you can build them to any required size.





IF NOT, we want you to send for a sample dozen to your jobber. The **"LONGEVAL,"** as its name implies, has long life; it is made with unsparing pains, it is impossible to conceive of any methods which produce greater and better safeguards and protection for mainsprings, than have been adopted in putting this spring on the market.

BRIEFLY, the chief features are: The springs are manufactured by the best maker in Europe, with years of successful reputation, and an experience handed down from ancestors of mainspring makers, all of whom excelled in the manufacture of springs. The **"Longeval"** springs are protected against all climatic changes; each spring is wrapped in anti-rust paper, then packed in an individual paper box, which is in turn wrapped in lead foil, as shown in the above illustration, which excludes all possibility of dampness reaching the springs. Twelve boxes, each containing a spring are placed in a strong sliding box, bearing a label describing the watch for which the springs are intended.

The advantages are: No springs exposed to the air and endangered by moisture or climatic changes; only one spring has to be handled at a time, and not a full dozen, as heretofore; a guarantee accompanies every dozen springs; the **"Longeval"** spring is made of highest grade steel, fine in grain, high in carbon, and carefully finished down by hand, the only method that will ensure a spring to stand up well after years of daily use in a watch. Nothing has been left undone to make the **"Longeval"** mainspring the finest possible.

Get the Best—The "Longeval"

Order a sample dozen from your jobber; if you cannot obtain them there, write direct to the importers, **HAMMEL, RIGLANDER & CO., 35 Maiden Lane, New York,** who will inform you of the nearest jobber who will supply you.

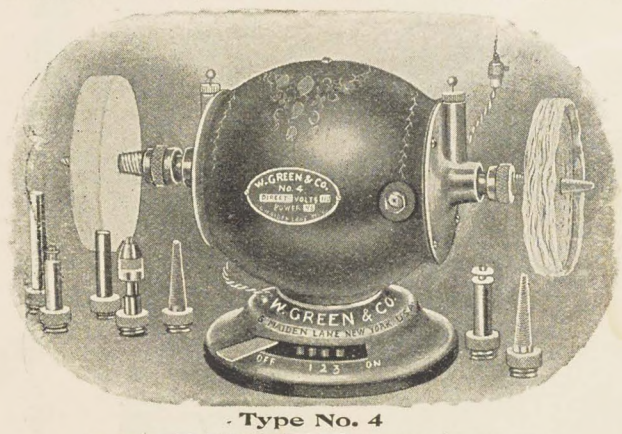
NOTICE

The importers of these mainsprings are the first to have employed the idea of putting each spring in a separate box, thus protecting them against rust and climatic changes, and to place a number of these small boxes in a box or case.

They have taken expert advice as to their sole and exclusive right to this manner of "dressing" mainsprings, and have been advised that they have a proprietary right thereto.

The trade is hereby notified that any infringement of this manner of "dressing" mainsprings for the market will be vigorously prosecuted.

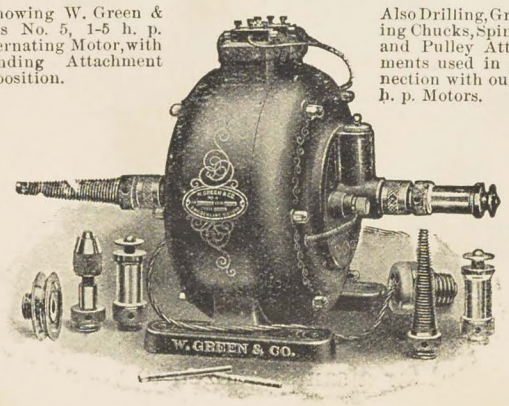
Showing W. Green & Co.'s No. 4, 1-5 h. p. Direct-Current Motor, with Buffing and Polishing Attachments in position. Also Drilling, Emery and Grinding Chucks and Spindles used in connection with our 1-5 h. p. Motors.



Type No. 4

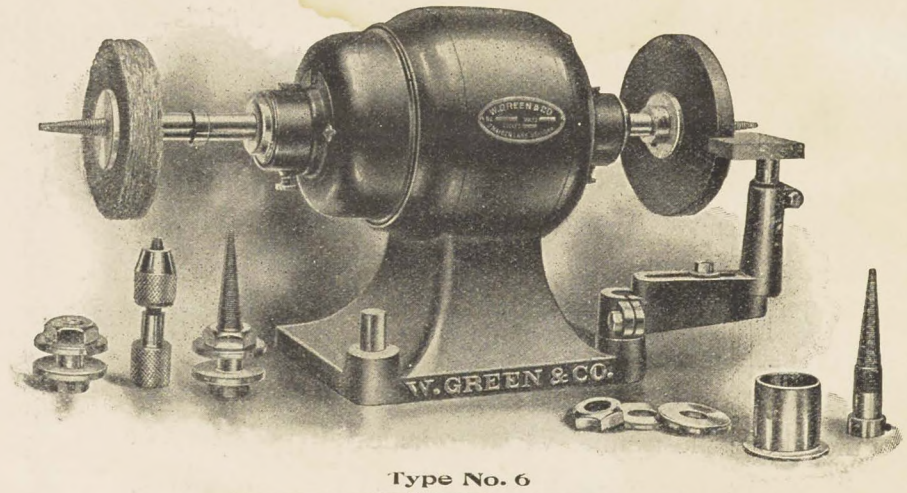
Showing W. Green & Co.'s No. 5, 1-5 h. p. Alternating Motor, with Grinding Attachment in position.

Also Drilling, Grinding Chucks, Spindles and Pulley Attachments used in connection with our 1-5 h. p. Motors.



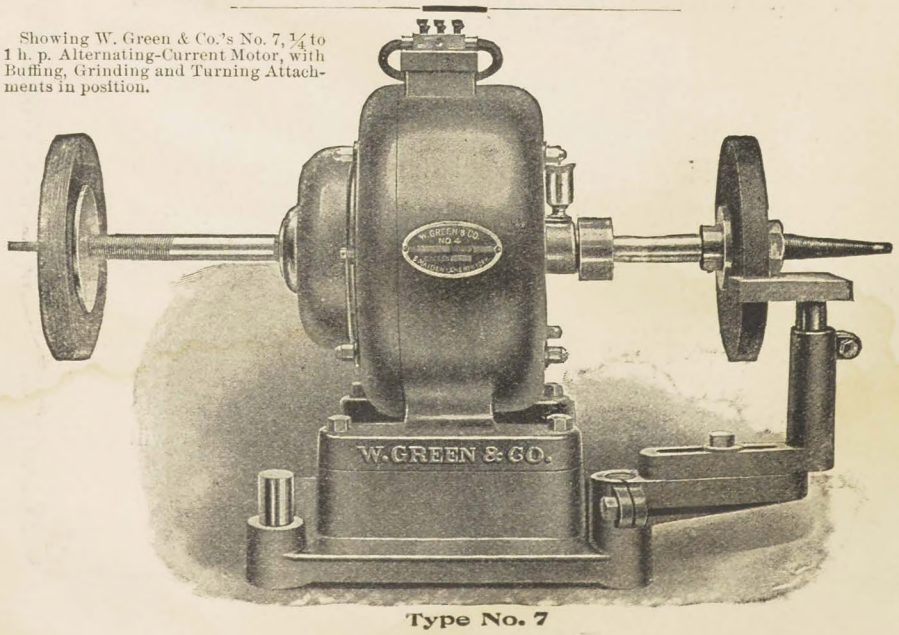
Type No. 5

Showing W. Green & Co.'s No. 6, ¼ to 1 h. p. Direct-Current Motor, with Buffing, Grinding and Turning Attachments in position. Also Drill Chuck and various Spindles, etc., used in connection with our Direct and Alternating-Current Motors.



Type No. 6

Showing W. Green & Co.'s No. 7, ¼ to 1 h. p. Alternating-Current Motor, with Buffing, Grinding and Turning Attachments in position.



Type No. 7

Dimension and Weight of W. Green & Co.'s Electric Motors, Nos. 4, 5, 6 and 7

	No. 4. Direct Current.	No. 5. Alternating Current.	No. 6. Direct Current.	No. 7. Alternating Current.
Total length of motor with spindles in position,	18 inches	16 inches	28 to 30 in.	25¼ to 29 inches
Length from Motor to end of spindles	5¾ "	5¾ "	11¼ " 12½ "	9½ " 11½ "
Height from center of spindle to base	5½ "	5 "	8 "	8 " 9 "
Total height of motor	8½ "	8 "	12 " 14 "	14 " 16 "
Net weight	30 lbs.	11 "	60 " 90 lbs.	74 " 130 lbs.
Gross weight	37 "	35 lbs.	80 " 115 "	100 " 165 "
		42 "		

The above measurements vary according to size and horse-power

NOTE.—For use only when deep interior polishing is required. For general use this spindle, owing to its length, should not be used for constant service, to avoid straining the armature.

Special and extra long spindle for our Nos. 4 and 5 Motors, right hand side, for large interior polishing, such as Water Pitchers, Coffee Urns, etc. Price, $2.50

Save Your Time, Patience and Money and Purchase the W. Green & Co. Electric Lathe Motor for $30.50, worth $100.00

Don't wait, but buy it now. Money willingly refunded if not as represented and found unsatisfactory

For general use, our Motors have no equal at any price

Perfection in Electric Motor Lathes!!

For Watchmakers, Jewelers, Opticians, Silversmiths, Dentists, Machinists, Electricians, Brass Workers, Glass Cutters, Model Makers, Cutlery Mfrs., and for all other trades and purposes.

"Nothing better can be made; absolutely dust-proof, air and water tight, and fully warranted."
With reasonable care these motors will last, in constant use, for 20 years.
(Speed, 1200 to 3000 revolutions per minute, as desired.)

The W. Green & Co.'s "IMPROVED" Combination Polishing, Buffing, Grinding, Drilling and Turning Electric Lathe Motors. (4 Lathes in one, at price of one.)

Net Price-List of Our Latest Improved Motors. Model for 1905

Voltage.	Horse Power.		Direct Current	Alternating Current.
52 to 110	1-5,	including 5 new-style adjustable chucks	$30.50	—$ 42.50
115 " 220	1-5,	" 5 " " " "	35.00	——47.00
52 " 110	1-4,	with long adjustable spindles, grinding and tool-rest attachments	50.00	——73.50
115 " 220	1-4,	same description	55.50	——78.00
52 " 110	1-3,	" " "	60.00	——85.00
115 " 220	1-3,	" " "	65.50	——95.00
52 " 110	1-2,	" " "	75.00	— 115.00
115 " 220	1-2,	" " "	80.50	— 120.00
52 " 110	3-4,	" " "	85.00	— 130.00
115 " 220	3-4,	" " "	90.50	— 135.00
52 " 110	1,	" " "	115.00	— 165.00
115 " 220	1,	" " "	125.00	— 185.00
500	1-4,	" " "	65.00	————
500	1-3,	" " "	72.50	————
500	1-2,	" " "	88 00	————
500	3-4,	" " "	95.00	————
500	1,	" " "	125.00	————

Automatic underload release starting box No. 10 for ¼ to 1 h. p. Direct-Current Motors, ... **price, $4.00**

Latest automatic underload release starting box and controller No. 12, for ¼ to 1 h. p., with combination speed regulator attached for seven variable speeds, to enable the operator to regulate the motor to any speed desired, ... **price, $10.00**

NOTE.—We supply a specially prepared compound for use as a lubricator on the **W. Green & Co.'s Nos. 4 and 5 Motors.** One filling of the grease cups will last for 6 months. "Do not use vaseline." **Price, 50c. per can.**

EXTRA ATTACHMENTS	For 1-5 h. p.	For 1-4 to 1 h.p.
Special Adjustable Solid Brass Single Motor Pulley with Lathe attachment, for Watch or Dental Lathe, Dynamo, Fan, etc.	$1.75	$4.00
Ditto, three (3) Cone Pulley	3.50	7.00
Adjustable Chuck, with Lathe attachment, for cleaning, grinding or buffing inside of rings, tubes, etc.	1.50	4.00
Adjustable Drill Chuck, with Lathe attachment	3.00	7.00
Spare Chucks, with Lathe attachment	1.50	4.00
Extra tool rest, complete		5.00
Set of extra hangers and nuts for grindstone, etc.		1.00

WITH electric power circuit now in almost every community the trade have an opportunity to use, much to their advantage an electric motor, for grinding, buffing, polishing, etc. They will consequently be interested in the motors here illustrated, which are specially made for this purpose and fully warranted in every respect. In the construction of the motors all possible precautions for the durability of the machine and the protection of the operator have been taken. The wearing parts are well made and are interchangeable. The chucks are held by a lock nut, which is quickly adjusted. Automatic lubrication is provided for. The motor consumes under average working conditions about as much current as one 16-candle power lamp. The direct-current motors are supplied for any voltage from 6 to 250; while the alternating-current motors for any voltage from 52 to 220, and for any frequency from 6 to 125 cycles per second.

NOTE.—In ordering **be sure** and state **horse power, current, voltage,** and **cycles** required. **All our alternating-current motors are self starting.** Alternating-current motors are only made with one speed, but we supply a Three (3) Cone Pulley for variable speeds, specially adapted to our Alternating-Current Motors for attachments to Lathes, Dynamos, Fans, etc., where more than one speed is required.

SPECIAL NOTE

The strength of our direct-current motors can be instantly reduced by aid of the adjustable switch or regulator attached to the motor to any reasonable power desired. They can be attached in one minute to any ordinary electric-light socket, and are **absolutely guaranteed,** therefore do not hesitate to place your order. "Our motors are always ready for immediate use, no further adjustment being required."

With all 1-5 h. p. direct-current motors, we include a starting box or regulator, **no extra charge,** which starting box or regulator is attached to the motor. For regulator and starting box, etc., absolutely necessary for ¼ to 1 h. p. direct-current motors, see price-list. Alternating-current motors do not require starting boxes, being only made with one speed.

We supply either light or heavy chucks and spindles for our 1-5 h. p. motors. The heavy chucks, etc., are best for general use, excepting for Dental work.

Our 1-5 h. p. motors are powerful enough for the work of any ordinary size workshop, and the 1-3, 1-2, 3-4 and 1 h. p. for the largest and heaviest work usually required—such as, large Silver Water Pitchers, Waiters, Tea Service, etc.; also for heavy Polishing, Grinding, Drilling, Buffing, Turning, etc.

Direct-current motors are absolutely noiseless, and the alternating as near noiseless as it is possible to make them.

W. GREEN & CO., Manufacturers and Exporters

6 Maiden Lane, NEW YORK, U.S.A.

N. B.—We solicit correspondence for further particulars if necessary, and list of 100 unsolicited testimonials from the most reliable sources, the originals of which we have on file. They should give sufficient assurance that there is absolutely no risk or speculation in ordering our motors.

W. GREEN & CO.

The "Imperial" Mainsprings are all right.

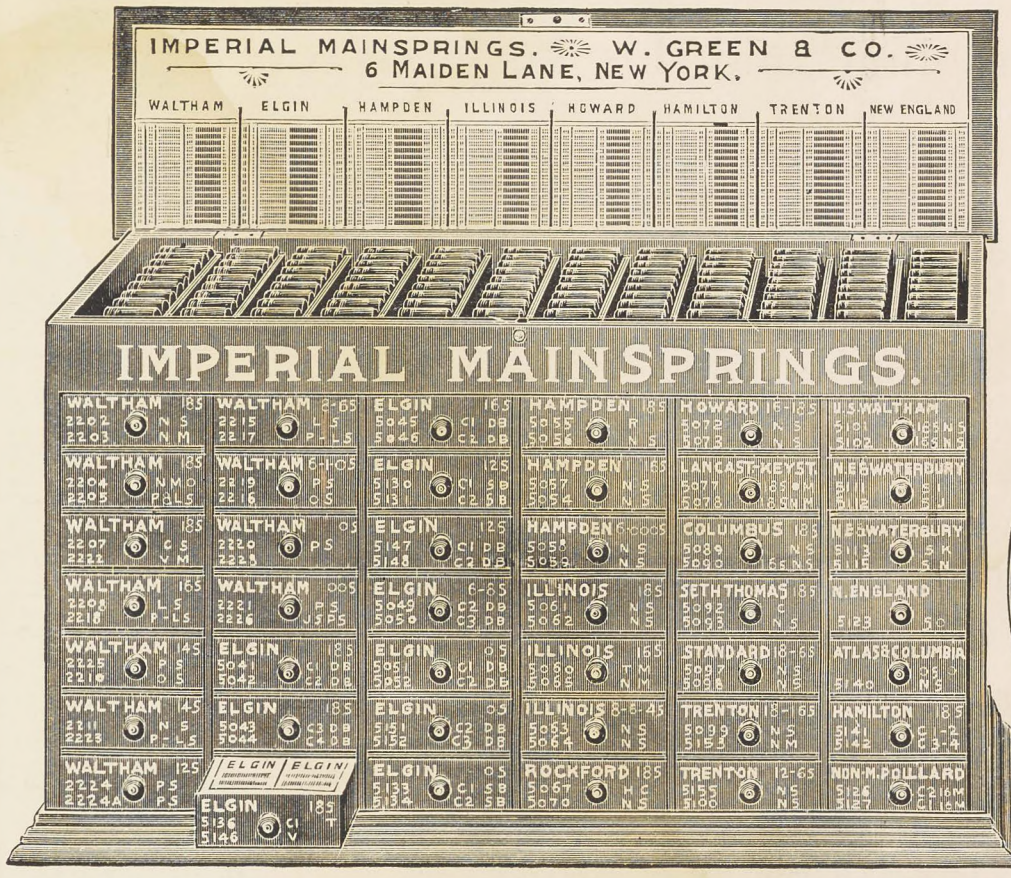
"Nothing better can be made." { Don't miss this opportunity, but try them !!!

They are the BEST, the MOST RELIABLE, have QUALITY, FINISH, ELASTICITY, TEMPER, STRENGTH and DURABILITY, are COILED and TAGGED, arranged in the MOST CONVENIENT manner, and "GUARANTEED."

For **$12.00** net cash you will receive our **20 drawer,** quartered Oak or Cherry Cabinet, complete with labels, bottles and a **full gross** of the celebrated "Imperial" Mainsprings.

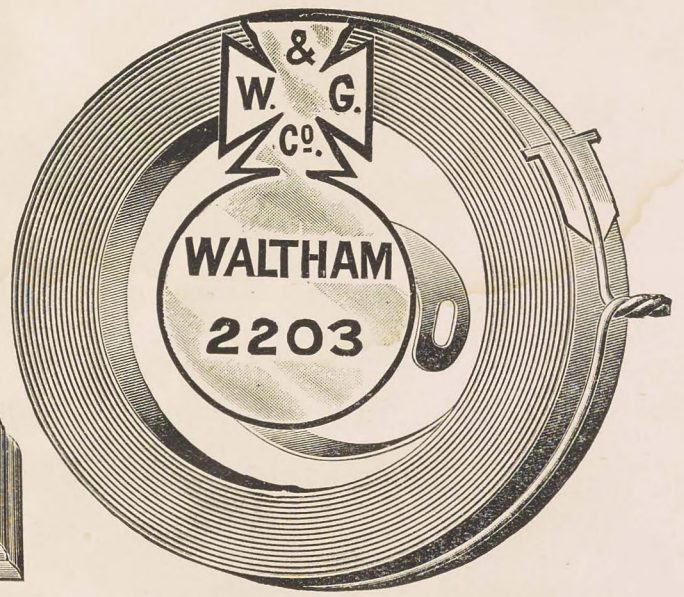
For **$36.00** net cash you will receive our **new 42 drawer** quartered Oak or Cherry Cabinet, complete with labels, bottles and **three gross** of the celebrated "Imperial" Mainsprings.

For further particulars, read important notice below



Price, only **$12.00** Per Gross

1.00 Per Dozen



SPECIAL NOTE.—The Cabinets are far superior than represented by cut. The 20-Drawer Cabinet (capacity of which is 5 gross) is worth **$6.00**, and the 42-Drawer Cabinet shown in cut (capacity of which is 15 gross) is worth **$15.00**

Enlarged and correct view of Waltham No. 2203 "Imperial" Mainspring, coiled and tagged

ORDERS FOR

Watch Materials, Tools, Jewelers' and Engravers' Supplies

FILLED FROM ANY CATALOGUE AT LOWEST MARKET PRICES

WORTHY OF ATTENTION

The following letter is but a sample of unsolicited testimonials daily received from most reliable sources in every State of the Union:

Utica, N.Y., Sept. 15.

MESSRS. W. GREEN & Co., New York City, N.Y.

Gentlemen:—Please send us the following mainsprings:

1 dozen	5057.	1 dozen	5043.
3 "	2203.	1 "	2220.
2 "	5053.	1 "	2209.
2 "	5046.	1 "	2210.

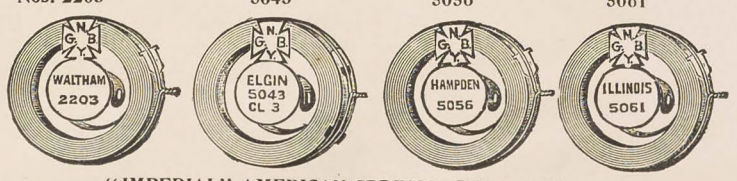
Be sure and send your "Imperial" mainsprings, as will not accept any others, having had the best possible success with them. We consider them far superior to any other mainsprings in the market, and your service is all we could desire.

Yours very truly, EVANS & SONS.

N. B.—We carry in stock 175 different styles and sizes of "Imperial" American and 450 sizes of "Imperial" Swiss Mainsprings

Facsimile of

Waltham Nos. 2203 | Elgin 5043 | Hampden 5056 | Illinois 5061



"IMPERIAL" AMERICAN SPRINGS, Coiled and Tagged.

None genuine unless marked "**Imperial,**" coiled, tagged and bearing our Registered Trade-Mark, as shown in cut.

IMPORTANT NOTICE!

With a first order for one gross of "**Imperial**" **American or Swiss Mainsprings** we send **gratis our 20 Drawer,** or with an order for three gross our **42 Drawer improved, handsome, polished, rubbed finish, Quartered Oak or Cherry Mainspring Cabinet,** as shown in cut. These cabinets are splendidly made, hard wood, cabinet finished and dove-tailed throughout; are the only cabinets made which properly arrange, systematize and keep in thorough order the many American or Swiss Mainsprings necessary for constant use at the present time, and will be greatly appreciated by all first-class watchmakers. Besides being very useful they are very handsome in appearance. The drawers have fancy knobs, brass trimmed, and the tops arranged in grooves for screw-top bottles for various watch, jobbing and other materials.

The 12 Drawer will hold 5 gross and the 42 Drawer Cabinet 15 gross of "Imperial" American or Swiss Mainsprings. We also include a handsome set of perforated gummed labels, with the name, number and size of springs, to enable the drawers to be numbered as desired. These numbers correspond to an up-to-date directory and guide of all the American Mainsprings made, which directory accompanies the cabinet. The guide shows the **correct style, width, strength and number by the genuine Dennison's Standard Gage,** and the correct **number** and **names** for ordering.

The latest "Imperial" American Mainspring Chart and Guide sent free of charge upon application

W. GREEN & CO., 6 Maiden Lane NEW YORK, U.S.A.

Importers, Exporters, Jobbers, Manufacturers { Watch Materials, Tools, Jewelers', Engravers' and Opticians' Supplies

("We handle everything known to the trade and solicit correspondence")

Every successful manufacturing jeweler in Maiden Lane, New York, has won his success by eternal vigilance of what was going on about him and his keenness of perception in determining whether a new thing would "catch on."

The house that gets first before the trade with the new things gets the business.

The point we want to emphasize is simply this:

By announcing to the trade promptly—instanter—in advance of any other house—the new lines that are seasonable and pushable we have grown to be the largest house in our line.

Our methods of getting business are simple and inexpensive and every retail jeweler can adopt our plans to his everlasting profit.

We have made up a booklet for the use of retailers.

It will produce business for you. We know it—have proven it.

These booklets will be printed for your store alone.

Only one store in a town.

The first shall be first.

Send for a copy.

M. J. AVERBECK, MANUFACTURING JEWELER

NINETEEN MAIDEN LANE, NEW YORK

THE ONLY LINE OF EMBLEMS FOR THE HOLIDAYS

Standard Patented Elk Tooth Charms, Choice Elk Teeth

188 E
Pat. May 27, '90

205 E
Pat. May 27, '90

190 E
Pat. May 27, '90

194 E
Pat. May 27, '90

184 E

196 E
Pat. May 27, '90

Standard Patented Lapel Buttons, Solid Gold, Forget=me=not Series

83 E
Pat. May 27, '90

84 E
Pat. May 27, '90

85 E
Pat. May 27, '90

95 E
Pat. May 27, '90

96 E
Pat. May 27, '90

97 E
Pat. May 27, '90

Fraternal Order of Eagle Buttons and Charms

479 E. Gold

482 E. Silver (gold letters)

477 E. Gold

474 E

478 E. Gold or Silver

439 E

445 E

455 E

456 E

457 E

458 E

459 E

460 E

448 E

449 E

450 E

451 E

If your Jobber does not handle them send to US for a SELECTION PACKAGE

THE GUSTAVE FOX CO.,

Manufacturing Jewelers and Diamond Importers

14=16 E. Fourth Street, CINCINNATI, OHIO

"Low Charges"

Once in a while one of our old customers will drift away from us for a short time, beguiled by the offer of "low charges" by some other assayer. He gets back to us, and *stays* with us, after one such experiment. He finds that when the charges are lower than ours there is something wrong with the assay—he doesn't get back the *full* value of his old metal. He realizes that it "comes high" to send Old Gold and Silver to an assayer whose charges are "lower" than Hagstoz Co.'s.

The customer gets all the value of his metal, less only *one* reasonable charge (for *we do the work*) when he sends it to

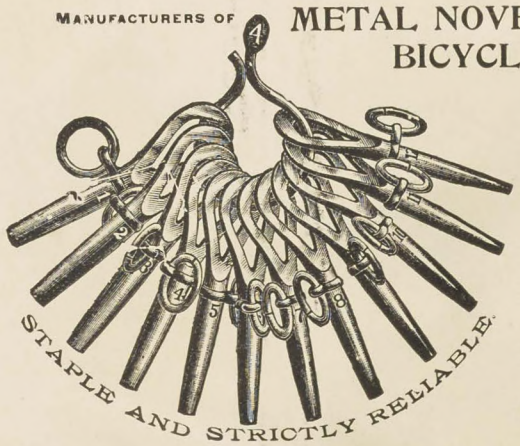
T. B. Hagstoz Co., Ltd.

Smelters, Refiners and Assayers

Office, 709 Sansom St., Philadelphia. Works, Riverside, N. J.

A. N. CLARK & SON, Plainville, Conn.

MANUFACTURERS OF

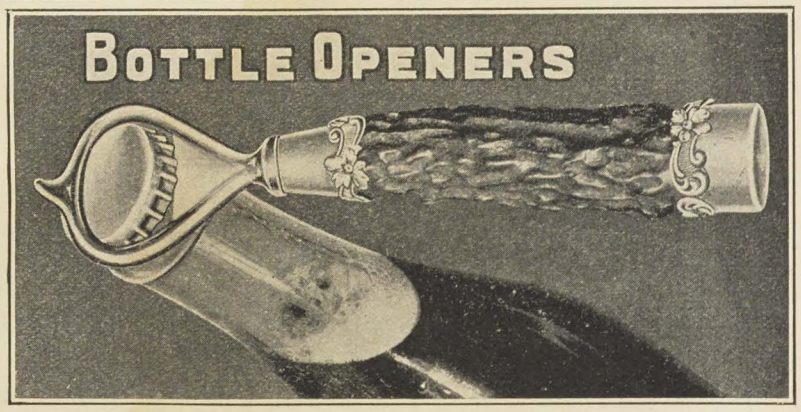


METAL NOVELTIES
BICYCLE SUNDRIES and
CLARK'S
CELEBRATED
LOOP
WATCH KEYS

Order Keys through your jobber, who will furnish them at our price.

J. H. Walbridge & Co., 337 Broadway, New York City, agents for Tweezers, Manicures, Key Rings, etc.

Stevens & Co., 99 Chambers St., New York, agents for Bicycle Sundries.



Bottle Openers

In Sterling Silver, Silver Plate, Buck Horn, etc. The convenience and cleanliness of this form of bottling having brought it into general use, these Openers will be appreciated for the table. **Send for Catalogue.**

Made by GOODNOW & JENKS, Silversmiths, 38 Stanhope Street, BOSTON
Who have obtained the sole right from patentee to manufacture this article

WE MAKE A SPECIALTY OF

CLOCK MATERIAL

and of WHEEL CUTTING and MAKING PARTS TO ORDER

MAIL ORDERS Filled Promptly

We keep in stock

English
German
Seth Thomas
} Hall Clock Movements

G. S. LOVELL CLOCK CO.

MANUFACTURERS' AGENTS

18 South Tenth Street, Philadelphia

PERFECT
CONSTRUCTION
IN EVERY DETAIL

HARD SPINDLES RUNNING IN HARDENED STEEL BUSHINGS

FULL NICKEL PLATE

BEWARE OF IMITATIONS

IN COMPARING PRICES WITH OTHER LATHES, LEARN THE DIFFERENCE IN SIZE, QUALITY AND DETAILS OF CONSTRUCTION

Lathe, including Taper and Screw Chuck, 6 Cement Chucks and belting . . . **$29.00**
Extra Wire and Wheel Chucks . . . . **.75 each**

A CHUCK MAY LOOK ALL RIGHT, YET BE ALL WRONG. Our Chucks are made of the very best steel and absolute concentricity of cone, thread and hole is obtained by the most improved methods based upon years of experience. We use no Dies for the threads, but CUT THEM ON A LATHE; nor do we file and polish the cone, body or hole, but GRIND them to a standard on special grinding machinery and guarantee perfection in every part.

WE CAUTION YOU AGAINST THE IMPERFECTIONS OF THE IMITATION

This certifies that the Lathe marked
AMERICAN WATCH TOOL CO.,
No. 12824
was made by us from the best materials, on the most approved plan, and is a reliable lathe. For any defect in material or workmanship we hold ourselves responsible.
But Notify US Promptly of Any Faults. No Claims Allowed After 60 Days.
WALTHAM, Jan. 7th, 1904. American Watch Tool Co.,
INSPECTED BY J. Graham.

This guarantee is backed by our experience of 32 years in building Lathes and the perfect methods used in their construction.

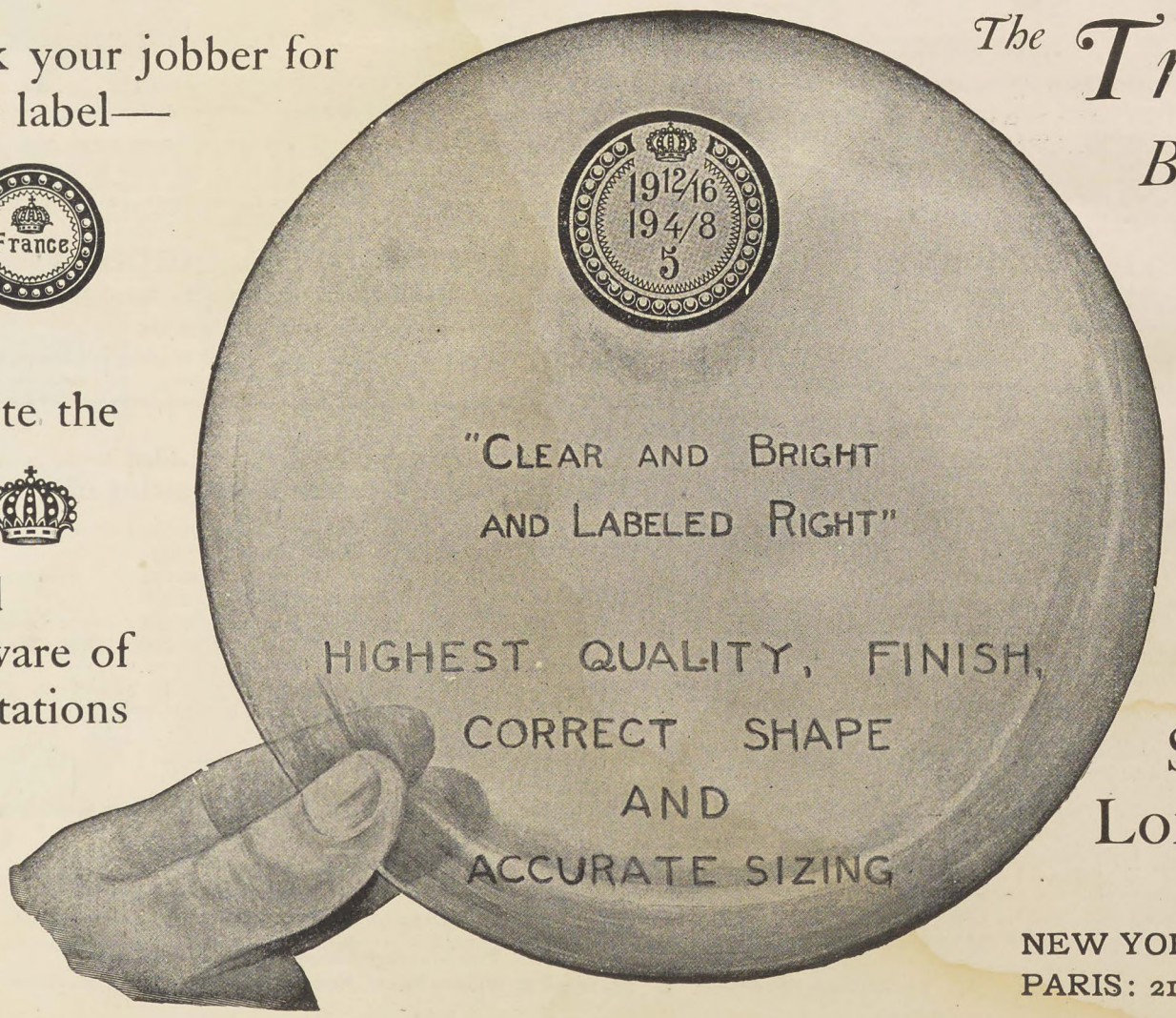
FOR SALE BY ALL JOBBERS
IN THE UNITED STATES AND CANADA

Ask your jobber for this label—

France

Note the

and beware of imitations



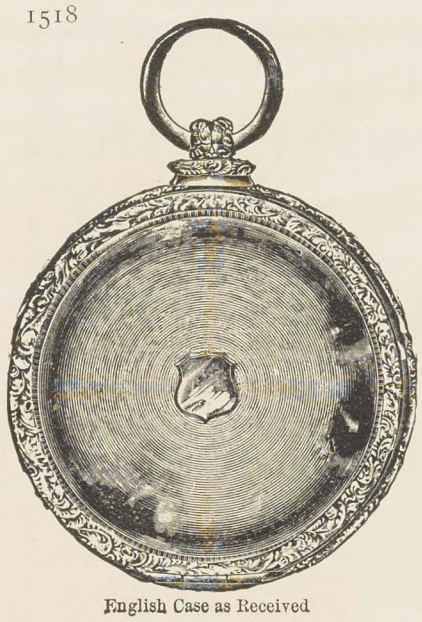
The ***True Blue*** *Beaded Label* ***French Watch Glass***

Ask Your Jobber For Them

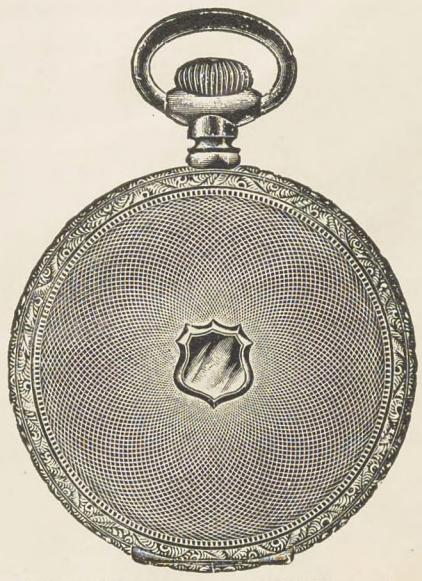
SUSSFELD, LORSCH & CO.

Wholesale Agents

NEW YORK: 37 Maiden Lane
PARIS: 21 Rue de l'Echiquier



English Case as Received



As Remodeled for American S. W. Movement

WENDELL & COMPANY

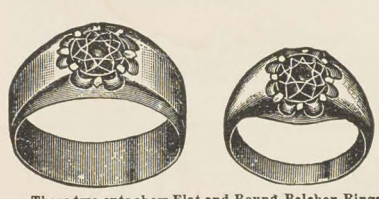
WATCH CASE MAKERS, REMODELERS AND REPAIRERS

Special Cases to Order in Gold and Silver, for English, Swiss and American Movements.
Key-Wind Cases changed to Stem-Wind.
English Cases changed to fit American Movements without altering outside appearance.
Hunting Cases changed to Open-Face.
Old Watch Cases Repaired and Renewed.
Melting old gold cases and making over into new case (using same gold) a specialty.

TWO WONDERFUL SHOPS

93, 95 *and* 97 William Street, New York **57 Washington Street, Chicago**

NEW CLAWS ON OLD DIAMOND RINGS



These two cuts show Flat and Round Belcher Rings as received, with claws badly worn off and too low to permit resetting stones again.

These cuts show the same rings with new, high claws, stones securely reset, and entire rings refinished like new.

Net Price for six new claws, resetting stone and refinishing ring like new, $ .75 to $1.25
" " " eight " " " " " " " " " " " " 1.00 to 2.00

We retip or put new claws on diamond Tiffany, Belcher, Tooth and rings of every description, to cost from 75c. to $2.00, according to the condition of ring and number of claws on setting.

Initial glove ring with one claw at each end holding set.

These two cuts show initial and cameo glove ring, with two and four claws soldered to the setting, which hold the sets in very securely.

Two new claws on glove ring, 50c.
Four " " " " " 75c.

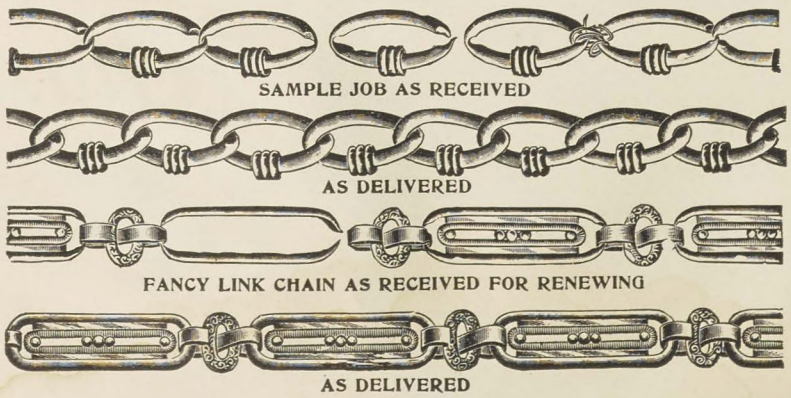
WENDELL & COMPANY

The Special Manufacturers for the Retail Jewelry Trade

TWO WONDERFUL SHOPS

93, 95 & 97 William St. NEW YORK — 57 Washington St. CHICAGO

Cameo glove ring with four claws at corners holding set.



Gold Chains Refilled, Renewed and Repaired

Old Chains made over into new patterns, using same gold.

Good Work. Low Prices. Prompt Attention

WENDELL & COMPANY

THE SPECIAL MANUFACTURERS FOR THE RETAIL JEWELRY TRADE

NEW YORK 93, 95 & 97 William Street — TWO WONDERFUL SHOPS — CHICAGO 57 Washington Street

Stone-Setting

We carry a most complete stock of Precious and Semi-Precious Stones for special work and replacing lost sets. We import them direct from the cutters in Europe, and furnish them to the trade in single stones at dozen and gross prices.

Have your stone-setting done in our shops and save from thirty-five to fifty per cent.

We employ first-class setters, and turn out work very promptly.

No job too small to receive our careful attention.

Wendell & Company

Repairers and Special Manufacturers for the Retail Jewelry Trade

93, 95 *and* 97 William Street NEW YORK — **TWO LARGE FACTORIES** — **57 Washington Street CHICAGO**

For 23 years we have been doing

Gold and Silver Plating

Sterling and Plated Ware Repairing for the Trade

Do we do yours?
Our plating rooms are the best equipped in the country for job work

BEFORE

AFTER

WE REPAIR

any article in the silverware line; making new parts to match the old ones that have been melted or broken off, the same as new.

WE REPLATE

any metal article in gold, silver, nickel, bronze, brass, oxidized silver, old bronze, statuary bronze, and all antique finishes.

Wendell & Company

Repairers and Special Manufacturers for the Retail Jewelry Trade

TWO WONDERFUL SHOPS

93, 95 *and* 97 William Street, New York **57 Washington Street, Chicago**

Great Promptness in Getting Out Special Order Work and Repairing of all kinds

together with Good Work and Low Prices are the features that made our business the only success of its kind in the country.

For 23 years we have made a separate and distinct business of doing Special Order Work and Repairing for the Trade.

We understand our business and there is not a Job or Special Order for New Work that is taken into a Retail Jewelry Store (except watch work) that we are not prepared to do in our own factories.

It is to your best interest to deal with us. By giving your customers perfect satisfaction with their repairs and made-to-order work, you increase your entire business.

Send for our Repair Price-List and Special Order Work Catalogues

Wendell & Company

The Special Manufacturers for the Retail Jewelry Trade

Two Wonderful Shops in Fire-Proof Buildings

93, 95 *and* 97 William Street, New York **57 Washington Street, Chicago**

FRATERNAL ORDER EAGLES

No. 238

No. 232. Genuine Eagle Claw

No. 233. Genuine Eagle Claws

No. 234

No. 240
Genuine Eagle Claws

No. 231
Genuine Eagle Claw

No. 236

No. 57
Lapel Button
Genuine
Eagle Claw

No. 49

No. 58
Lapel Button

No. 237. Seal

No. 239

No. 56. Lapel Button

No. 48

No. 55. Lapel Button

Ours is about the only concern in the country that produces a line of High-Grade 14 K. hand-made **F. O. E.** and **B. P. O. E.** Charms, Rings, Lapel Buttons, etc. We do not make them in large quantities—just enough to keep our best workmen employed when not busy on special order work.

If you want something for stock different from the conventional machine-made goods sold by everybody, or if you have a fastidious customer who is willing to pay for an exclusive and better article than is ordinarily shown, it would be a pleasure for us to send you an assortment for inspection. Our prices will be found very reasonable when quality, weight and workmanship are considered.

WENDELL & CO., 93, 95 *and* 97 William St., NEW YORK
57 Washington St., CHICAGO

We sell these goods only to Retail Jewelers

PRESENTATION JEWELS, MEDALS AND BADGES MADE TO ORDER IN GOLD AND SILVER

BENEVOLENT PROTECTIVE ORDER ELKS

No. 246

No. 276

No. 277

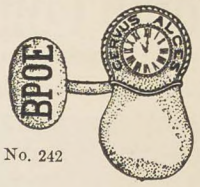
No. 278

No. 260

No. 286

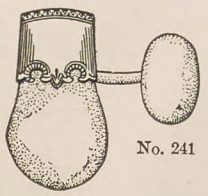
No. 275

No. 267



No. 242

No. 50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GENUINE ELK TEETH

No. 299

No. 245

No. 291

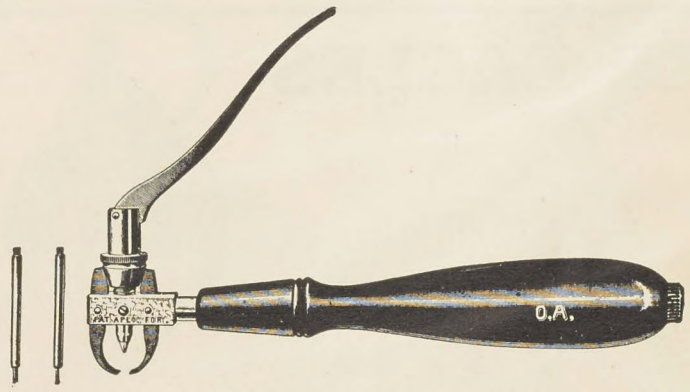
No. 249

No. 289

No. 262

No. 298

No. 293



New Patent Roller and Hand Remover

This combination tool will remove all sizes of **SINGLE AND DOUBLE ROLLERS** from balance staffs with safety and certainty, and will remove all sizes of watch hands without injury to dials. Expert watchmakers have pronounced it the most perfect tool of its kind in the market.

INSTRUCTIONS.—The jaws can be adjusted for small or large opening, just by turning thumb nut. It has two extra plungers for hand removing and one extra plunger for roller remover, which are kept inside of handle when not in use; the handle has a thumb screw in the back with a steel sleeve to fit over plungers. When changing plungers, open the jaws, hold the lever down, then unscrew plunger and put another in for hand removing, and keep the others in handle.

Solid Nickel and White Metal Chains a specialty

WE ARE NOW SOLE AGENTS FOR

The Sherman Safety Pin Protector

Pat. May 5, 1903.

For Scarf Pins, Studs and Lace Pins. The latest and best invented. Can be adjusted to any size pin.

Price, $1.00 per dozen

For sale by all leading wholesale jewelry and material houses.

Ask your Jobber for them

Ask your Jobber for them

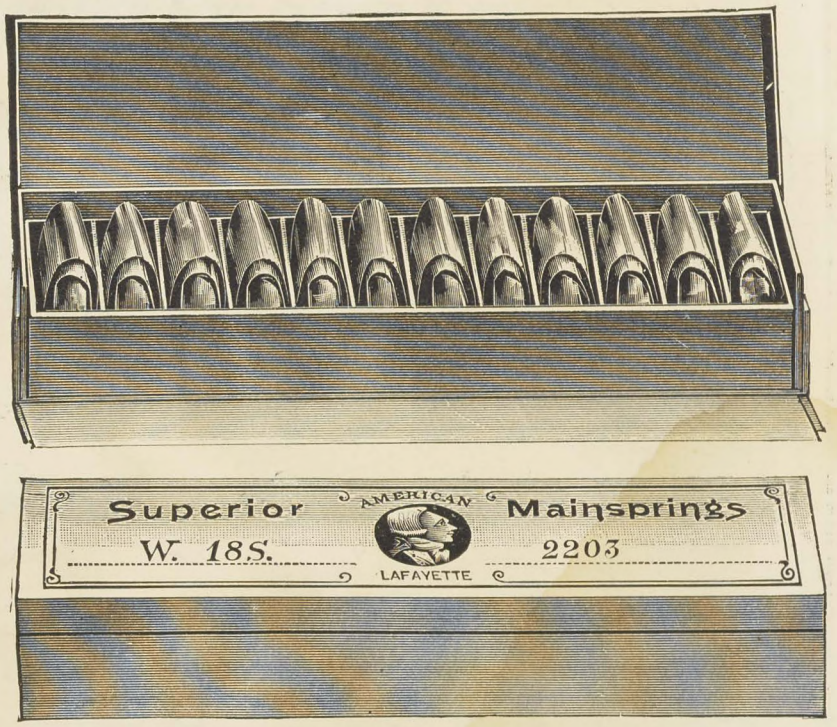
Henry Zimmern & Co., Inc.

Importers of Watch Material

60 John Street

NEW YORK

THE BEST IS THE CHEAPEST



Expert Watchmakers state that the

"Lafayette Mainspring"

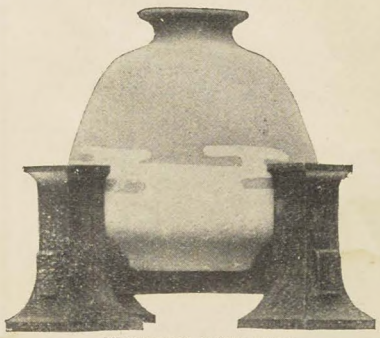
is the Acme of Perfection. Its advantages above other Springs in the market are manifold; we name half a dozen:

1st.—It is guaranteed to be made of the Best Steel.
2d.—It is made by Skilled Hand Labor.
3d.—Each Spring is wrapped in Oil Paper and Silver Foil, which packing positively avoids exposure to the moisture of air, and therefore all danger of rust is prevented.
4th.—Each Spring bears a Metal Tag, indicating the Watch it is intended for, which accuracy is warranted.
5th.—Each dozen is put in a neat Box, having twelve partitions, one for each spring, so the handling of several springs at one time is avoided.
6th.—The finish of the "Lafayette Spring" is, like its quality, superior to any in the market.

ART WARE FOR JEWELERS

Your customers will demand these lines

HENRI DEUX WARE



MISSION POTTERY

Owens' Mission Pottery

Entirely original—unique—pretty and artistic. Sold by the leading dealers of the country. Order early.

Henri Deux Ware

Reproduced from ware made in 1524. Original is worth fabulous prices.

Owens' Corona Ware

Most beautifully modeled pottery made in America. Have you seen the Owl?

Owens' Venetian Ware

Ancient modeling, finished in iridescent coloring, rivaling genuine opals in brilliancy.

Owens' Utopian Art Ware

Better than ever, but at a price within the reach of the masses. See the new Fruit decorations.

Visit one of our sample rooms, see representative, or write for prices at once

J. B. OWENS

Originator and Sole Manufacturer

Zanesville, Ohio

Salesrooms—
New York—68-70 W. Broadway
Boston—146 Franklin St.
Philadelphia—1035 Market St.
Chicago—514 Hartford Building
Pittsburg—420 Bissell Block

We do RELIABLE Silver-Plating and Silverware Repairing

Can this be Repaired? **Yes!**

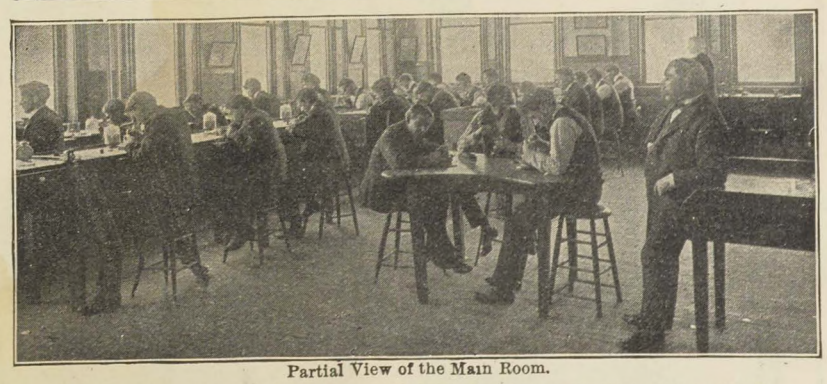
We Repair any article in the Silverware line, making new parts to match the old ones, broken or melted off, the same as new.
We Replate any article you want in Gold, Silver, Nickel, Bronze, Brass, Oxidized Silver, Old Bronze, Statuary Bronze, and all the Antique or Old Finishes, etc.

Silverware Repaired and Replated

Sercomb Company

A. N. SPERRY, Manager

1429 Wabash Ave.
CHICAGO



Partial View of the Main Room.

WILL YOU VISIT THE WORLD'S FAIR?

If so, pay us a visit, and we will show you how we are teaching our students to become successful Watchmakers. Our mode of instructing is a system original with us. It comprises science, accuracy, a saving of time and money to the students.

Results are: Efficient mechanics, good positions, greater pay. Our course is made so comprehensive by expert artisans as instructors that any live young man can thoroughly master it in from 6 to 12 months' time. *Write for our new Catalogue.*

ST. LOUIS WATCHMAKING SCHOOL, 5815 Easton Ave., ST. LOUIS, MO.

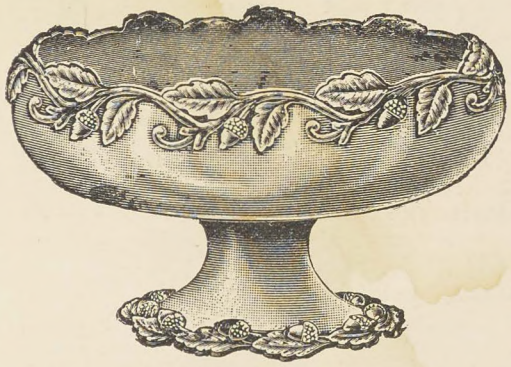
Anchor Silver Plate Co.

STERLING SILVER,
SILVER PLATED WARE,
FLATWARE,
CLOCKS, NOVELTIES, CUT GLASS,
ECCLESIASTICAL GOODS, ETC.

ORMOLU GOLD 24 K. CLOCKS
OUR SPECIALTY

PICTURE FRAMES
ORNAMENTAL MIRRORS

Main Office and Works St. Paul Minn.



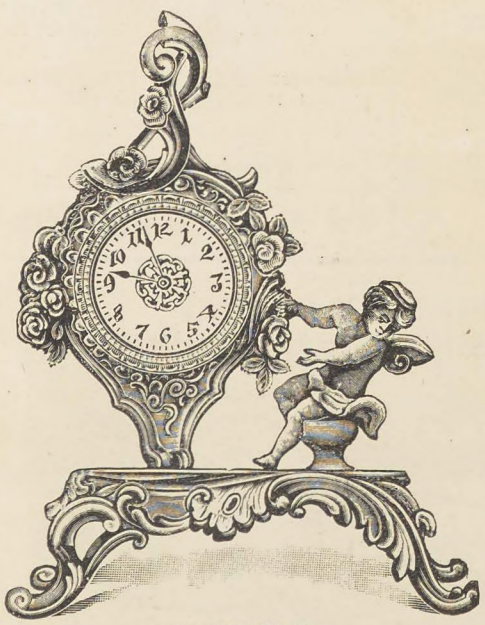
No. 226 Nut or Salad Bowl
We make a large variety of them in Burnished Silver, French Gray and Butler Finish

No. 19 Tea Pot
Our large assortment of Tea Sets we make in Burnished, Satin, Engraved, French Gray and Butler Finish, in all styles and designs

No. 3566 Jewel Box
Our line of novelties is very large and consists of several hundred patterns and the latest and most up-to-date designs

Send for our large illustrated catalogue. You will find therein hundreds of elegant designs, suitable for Holiday and Occasion Gifts

Our salesmen are now among the trade with their lines. Hold your orders until you see our new and up-to-date samples

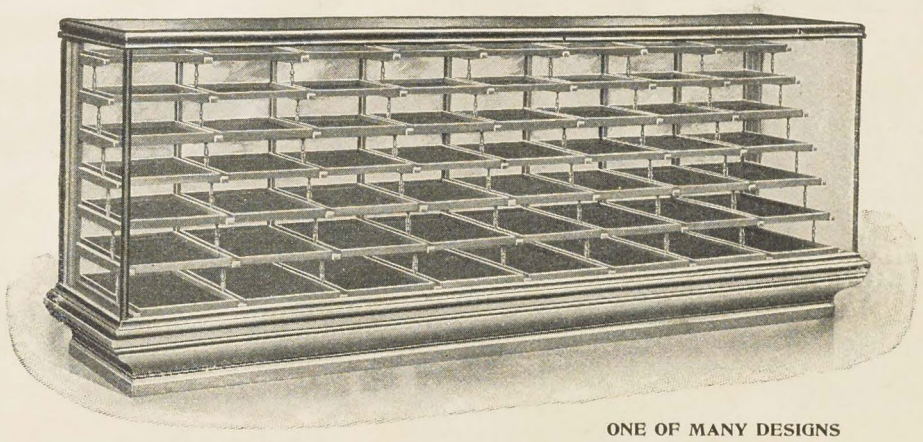


No. 2046 Clock
We finish them in Ormolu and DeLor Rose Gold, which is the latest and most up-to-date novelty. We guarantee them to be absolutely 24 karat fine gold plate

No. 805 Fruit
This is one of our new designs, of which we have four dozen patterns in Fruit and Berries to offer

No. 4575 Frame
This is a sample pattern of the great variety we make in high-grade goods

A FEW ILLUSTRATIONS FROM OUR NEW CATALOGUE



ONE OF MANY DESIGNS

A GOOD SHOW CASE

There are all kinds of show cases—good, bad and indifferent. Cheap, shoddy show cases are a poor investment

The *Silent Salesman* Show Case

TRADE MARK

has a house with 40 years' enviable reputation behind it. It is imitated but never equaled. Each and every case is as good as man can make or your money can buy.

WE MAKE A SPECIALTY OF JEWELERS' CASES AND FIXTURES. Send for our catalogue and description of our illuminated "Silent Salesman," head and shoulders above the rest

JOHN PHILLIPS & CO., LTD.

DETROIT, MICH. Est. 1864 WINDSOR, ONT.

ADDRESS ALL COMMUNICATIONS TO DETROIT

OCTOBER days with harvest blessed,
Grapes and cotton now are pressed;
Jewelers, too, in every clime,
Work, like farmers, overtime.

BEAD NECKLACES

All sizes and qualities, $7.50 per dozen up

The manufacture of **Rings** and **Gold Jewelry** has not caused us to neglect our **Jobbing Department,** which is to-day second to none, and which comprises the best products of 137 factories —a rather bold assertion, you may think. Please give us the opportunity to prove the same.

SIGNET RINGS a specialty **ROSARIES**

Selection packages upon request

Chicago
405 Masonic Temple
L. KATLINSKY

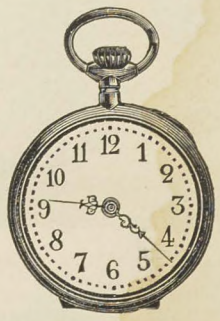
Factory, 51-53 Maiden

L. Witsenhausen
37-39 Maiden Lane. N.Y.

YOU HIT THE MARK

PUBLIC ATTENTION

when you offer our goods for sale to your customers. We have an exceptionally fine line of AMERICAN and SWISS WATCHES, CLOCKS, JEWELRY, etc., for your HOLIDAY TRADE.



Our Special
13 Ligne
Snap O. F.
Silver Watch

$1.75
Net

Goods sent for selection if desired.

We carry a complete stock of WATCHMAKERS' TOOLS, MATERIALS, JEWELERS' SUPPLIES and OPTICAL GOODS.

Sole agents for the RELIANCE Brand Balance Staffs and Jewels.

Korones Bros.

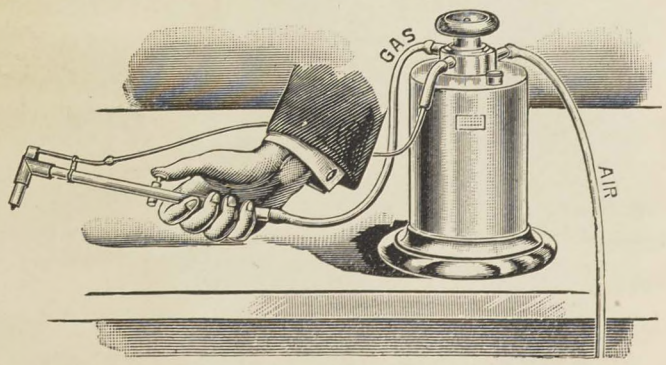
38 Chrystie Street, New York

No. 45 FOR FINE SOLDERING A GASOLINE GAS BLOWPIPE

As efficient, safe and easily controlled as an illuminating gas blowpipe

Write for descriptive circular

Price of outfit, with bellows,
$15.00

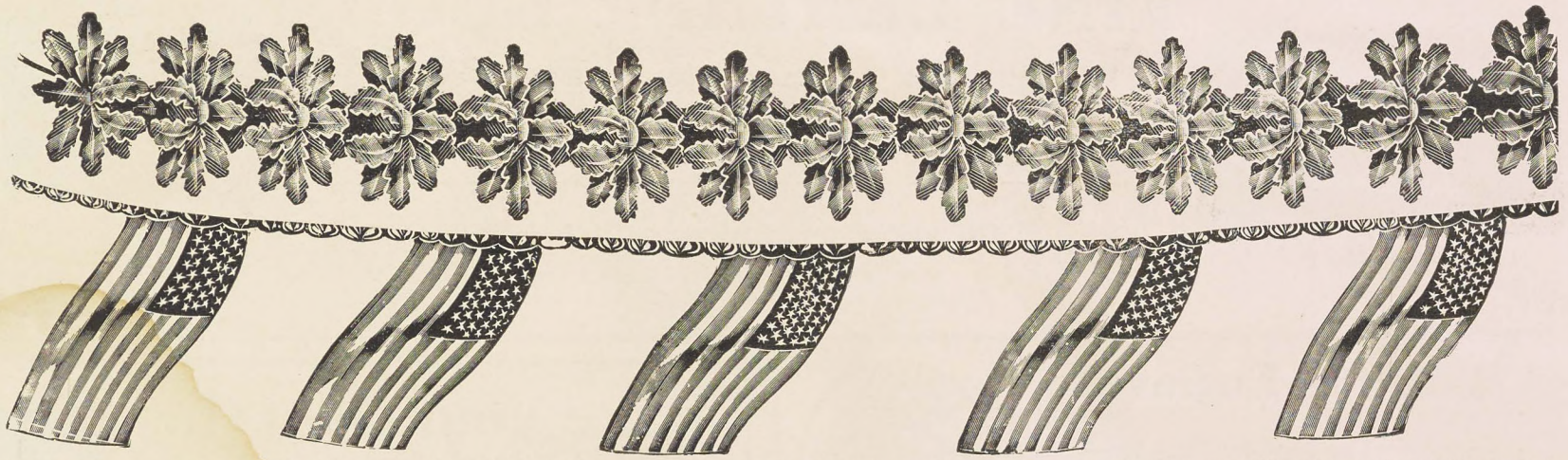


Buffalo Dental Manufacturing Co., Buffalo, N. Y., U.S.A.

Makers of Gas Blowpipes and Furnaces

1520 c

Fall Decorations Are Steps to Success



No. 2960. Folding Garland of American Oak, in splendid yellowish, reddish shades of autumn colors, 10 feet long and 8 inches wide; very full and showy. Will send a sample by mail on request. Per dozen, $3.00; each, 30c.
No. 2704. Flags of Nations, 15 in a string of 10 feet. Per dozen, $3.00; each, 30c.
No. 2705. Flags of United States of America, 15 in a string of 10 feet. Per dozen, $3.00; each, 30c. These flags are the most showy and attractive displays, and will be sent by mail on request.

No. 2994. Smilax

No. 2996. Fall Smilax, per yard, $1.00; per gross, $9.00
No. 2997. Smilax, with wild roses, per yard, $1.20
No. 2994. Smilax, without flowers, 15 piquets, per dozen yards, 60 cents; per gross yards, $5.40
No. 2995. Smilax, without flowers, 15 piquets, per dozen yards, 75 cents; per gross yards, $8.40

Chrysanthemum Sprays
(Cut representing Flowery Spray)

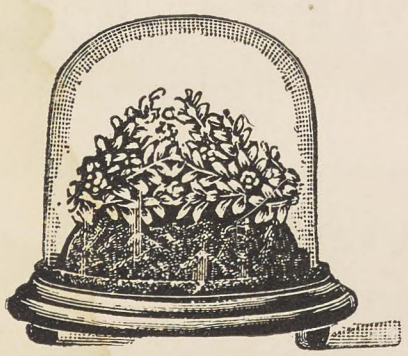
No.		Doz.	Gross
2539X.	Sprays,	$1.20	$9.00
2539	"	1.80	. .
2539A.	"	4.80	. .

No. 2975B. Fall Grapevine Garland. (Cut representing two yards)

No. 2975B. 12 extra fine, large, fancy, autumn colored grape leaves, as red, brown and green leaves, mixed in each yard; per dozen yards, $1.25; per gross yards, $12.00.
No. 2975F. 12 small, fancy, autumn-colored grape leaves; per dozen, 75 cents; per gross yards, $7.20.

No. 2743. Palm Plants

		Inches Leaves	High	Each	Dozen
No. 2743½.	Plants	3	24	$ .15	$1.20
" 2744¾.	"	4	36	.20	2.00
" 2745¾.	"	5	36	.40	3.20
" 2746¾.	"	6	36	.50	. .
" 2750.	"	10	45	1.00	9.60



Latest Solid Metal Myrtle Wreaths

used for silver or gold wedding celebrations; do not fail to inspect same, because your store is not complete without it. From $1.75 up; with glass globe as illustration, $2.75.

No. 2533. Rose Sprays

No. 2531X.	Rose Spray,	doz.,	$ .80
" 2532.	"	"	"	1.20
" 2533.	"	"	"	2.20
" 2531.	"	"	"	1.25

No. 2145. Rose Bush

No. 2143. Rose Bush, 24 inches high, 3 roses and 3 buds, each, $1.00; dozen, $11.40.
No. 2172. Rose Bush of American Beauty Roses, 18 inches high, including pot, per dozen, $9.00.
No. 2145. Rose Bush, 24 inches high, in any color, each, $1.50.

No. 2190. Miniature Flower Plant and clay pot; a very attractive novelty for young and old. A ready seller for 10c. Per dozen, 60c.; per hundred, $5.00.

The question of Decorating is a most important one, and our catalogue for 1904 will certainly direct your ideas in the way of decorations, souvenirs, favors, etc.

They serve a double purpose. They can be attractively displayed in windows, halls, stairways, counters, serving as an advertisement, and may be sold as desired and quickly turned into cash.

The prices will suit all purposes, some as low as 5c., all showing you very good profits.

Remember, they are Attractive, Popular and Profitable. Do not fail to call at our show room when in this city, or ask for Illustrated Catalogue No. 2.

FRANK NETSCHERT, 34 Barclay St., NEW YORK

1520*d* Established 1850

"DAMASCENE" HAND BAGS
New Designs

C. F. Rumpp & Sons

Manufacturers of

FINE LEATHER GOODS

POCKET BOOKS — CIGAR CASES — PHOTO. FRAMES
JEWEL CASES — DESK SETS — HAND BAGS, ETC.

SPECIALTIES FOR FINE JEWELRY TRADE

Fifth and Cherry Streets, Philadelphia

New York Salesroom, 683 and 685 Broadway
Chicago Salesroom, 35 Randolph Street, 509 Atlas Block

TRADE R MARK

SKIRT BOOKS

Send for Special Lists

Learn to Engrave!

At a School where practical engraving is taught in all its branches.

At the School whose graduates are always in demand.

At a School where instructions are given by and under the personal supervision of Mr. Richard O. Kandler, **who** is recognized as foremost authority on Engraving; **who** studied under the best masters of Europe and America; **who** is the founder of the **first exclusive Engraving School** in this country, and is still at the head of the Jewelers' School of Engraving established in 1889. Terms and Catalogue on application. *Correspondence solicited.*

GRADUATE CHICAGO

The Jewelers' School of Engraving

Suite 1119 Masonic Temple CHICAGO

SEND 25 CENTS FOR ARTISTIC SKETCH OF YOUR MONOGRAM

PLATE ENGRAVING, STEEL DIES, CRESTS, COAT OF ARMS.
FINE STATIONARY
PRINTING, EMBOSSING, ILLUMINATING
WEDDING INVITATIONS, ANNOUNCEMENTS
CALLING, AT HOME, BUSINESS CARDS ETC.
RICHARD O. KANDLER SUITE 1119 MASONIC TEMPLE CHICAGO

Make Your Own Gas

FROM GASOLINE

One quart lasts 18 hours, giving 100 candle power light in our

Brilliant Gas Lamps

Anyone can use them; are better than kerosene, electricity or gas, and can be run for less than half the expense.

15 CENTS A MONTH IS THE AVERAGE COST

Write for our K. S. Catalog. It tells all about them and our systems. Over 125,000 Brilliants sold during the last six years.

EVERY LAMP GUARANTEED

BRILLIANT GAS LAMP CO.
42 State St., CHICAGO, ILL.

100 Candle Power

THE LEDOS MFG. CO.

34-36 Pearl Street, NEWARK, N. J., U.S.A.

Manufacturers of

Watch Case Materials
Jewelers' Findings

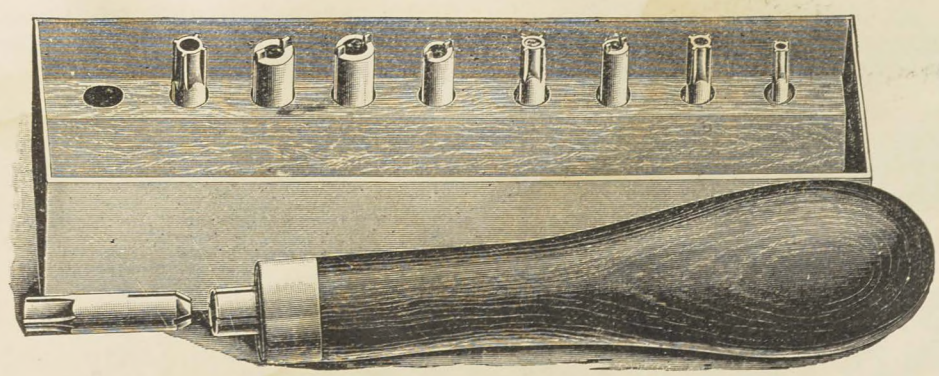
Crowns	Bezels	Bars and Sleeves	Bars	Snaps
Pendants	Centers	Stems and Collets	Toggle Chains	Hooks
Bows	Bushings	Swivels	Spring Rings	Solders
Springs	Ears	Chains	Jump Rings	Etc.

Registered
The
Trade-Mark

Combination Set of Sleeve Drivers

Most complete set made, consisting of 9 drivers.

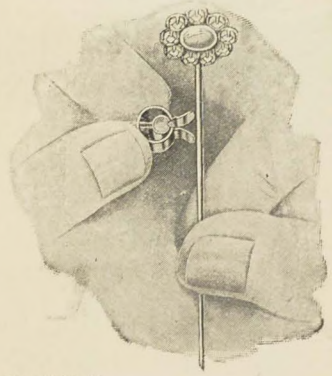
For Elgin, Waltham, Keystone and Dueber for 18, 16, 12, 6, 0 and Jewel Series Sleeves. Each one guaranteed.



Price, 75c. per Set

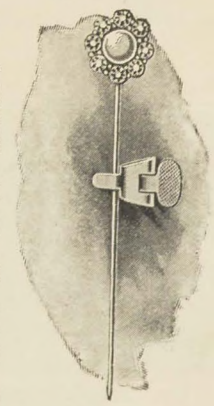
The NOBS Safety Catch

Patented June 27, 1904



POINTS IN FAVOR OF THE NOBS CATCH

1st. — Can be applied to Scarf, Clasp or Hat Pins from the side without looking for the point of the pin.
2d. — Will not injure the fingers from contact with the point of the pin as others do.
3d. — Will not scratch or damage the pin.
4th. — No breaking of nails in attaching or detaching.
5th. — Is adjusted quick as a wink.
6th. — No screw to get out of order.
7th. — Durable and simple in operation.
8th. — Solves the problem of simplicity and security combined.



ALL PINS CAN NOW BE WORN WITH NO FEAR OF LOSS!

Be sure you get the NOBS CATCH. It has no equal

Price, $1.50 per dozen

O. J. PFEFFER, President | Established 1890 | F. L. STEINER, Secretary

ST. LOUIS CLOCK & SILVERWARE COMPANY

TRADE MARK.

No. 616 Locust Street, St. Louis, Mo.

To The Trade

Our Thirteenth Annual Catalogue, larger and better than ever, has been issued, and on comparison will be found second to none.

We carry a complete stock of all goods listed, and ship all merchandise from St. Louis.

Through years of hard work, combined with an accumulated unlimited capital, our lines have become intensely interesting to shrewd buyers, our variety is endless.

GUARANTEE FACTORY PRICES

We meet any and all competition.
Most Liberal Terms.

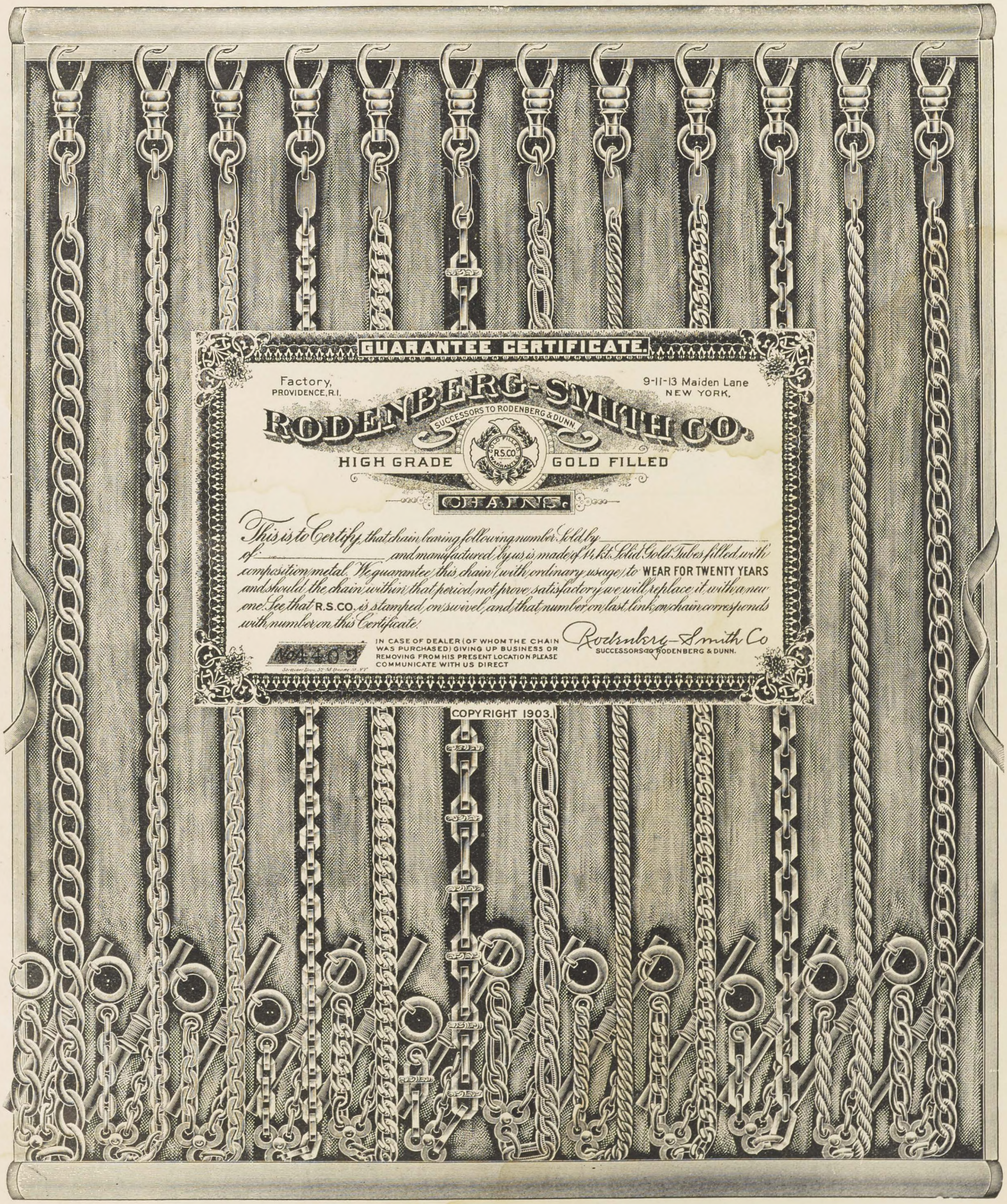
We extend a cordial invitation to the trade visiting St. Louis and the World's Fair, to call on us and make our house headquarters.
Send for a copy of our booklet (free), "Guide to the St. Louis World's Fair.

ST. LOUIS CLOCK & SILVERWARE CO.

No. 616 on Locust St., between Sixth and Seventh, South Side, St. Louis, Mo.

1520f

OUR CHAINS ARE GUARANTEED BY MAKER TO CONSUMER



ONE DOZEN ASSORTED CHAINS PUT UP IN SILK ROLL

Each Chain has its own individual number stamped on last link. These Chains made and guaranteed like a watch case. Back of the guarantee stands the largest chainmaking firm in the world. CARRIED BY ALL THE LEADING JOBBERS

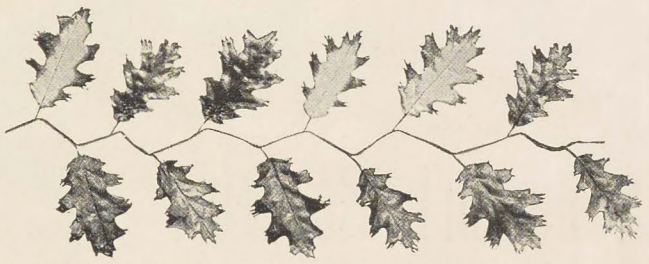
RODENBERG-SMITH COMPANY (Incorporated)

Successors to RODENBERG & DUNN and ALBRO & CO.

NEW YORK, 9-11-13 Maiden Lane — PROVIDENCE, 183-185 Eddy Street — CHICAGO, 103 State Street

THE LATEST FOR FALL DECORATIONS

No. 91011. Maple Vine, autumn shaded. Per dozen yards, 75c.; per gross yards, $7.50.



No. 91031. Oak Vine, autumn shaded, 12 leaves to yard. Per dozen yards, $1.75. Per gross yards, $17.50.

MY VERY LATEST IMPORTATION. This leaf is the finest imitation of the oak leaf as it falls from the tree, withered and lifeless.

No. 91012. Grape Vine.

The finest imitation of the Grape Vine in its early Fall shades ever produced. Per dozen yards, $1.25; per gross, $12.50.

No. 91014. Grape Vine, same as 91012, but with two bunches of grapes of either red, green or blue color to yard. Per yard, 40c.; per dozen yards, $4.00.

No. 91046.

Wild Vine, autumn shaded, 12 leaves to yard. Dozen yards, $1.00; gross yards, $10.00.

My Catalogue No. 9 is at your disposal

No. 91158. Oak Spray, autumn shaded. Just as though you cut twigs from the tree. Per dozen sprays, 90c. Per gross sprays, $9.00.

No. 91121. Chrysanthemum Spray.

No.		Per dozen.
91121.	18 inches long	$2.40
91122.	24 " "	3 00
91120.	14 " "	1.50

Chrysanthemums can be had in any of their natural colors.

I also have paper chrysanthemums in any color at $6 per gross.

No. 91814. Palm Plant. (Unpotted)

No.	In. high.	Leaves.	Each.	Doz.
91800	24	3	$.18	$1.75
91805	36	4	.25	2.50
91809	36	5	.40	4.00
91814	42	6	.50	5.00
91818	42	7	.65	6.50
91822	48	10	1.25	12.50
81827	60	12	2.00	20.00

No.	In. high	Leaves	Each
91851	24	4	$ .40
91855	36	5	.70
91857	36	6	1.00
91860	42	12	2.00
91862	60	15	3.50

CARL NETSCHERT

187-189 S. Clark St. **CHICAGO**

THE "VELVET" ADJUSTABLE BRACELET

Patented May 19th, 1903

FITS ANY SIZE OF WRIST

A simple arrangement of springs makes this bracelet adjustable to any wrist, whatever its size or conformation. It is thus the extreme of

Comfort, Comeliness and Security

Simple in its parts and strong in construction, it is durable and not liable to get out of order.

Made in rolled-gold plate and sterling silver. Plain or with signet or locket top.

Mason, Howard & Co.

MANUFACTURERS

New York Office
180 Broadway

Factory
Attleboro, Mass.

Hurrah! We Win!

So does the Retailer who sells Bastian's Class Pins and Badges

Now look here, Mr. Retailer, there's going to be a big demand for College and Class Pins this season.

And the retailer who sends for our large illustrated catalog, and puts himself in touch with Bastian, is the man who is going to make a lot of money.

We manufacture to order, Class Pins, Badges, Medals and Buttons in either Gold, Silver, Bronze, Celluloid or Ribbon.

What is the sense of paying other manufacturers $15.00 for something you can buy of us for $10.00?

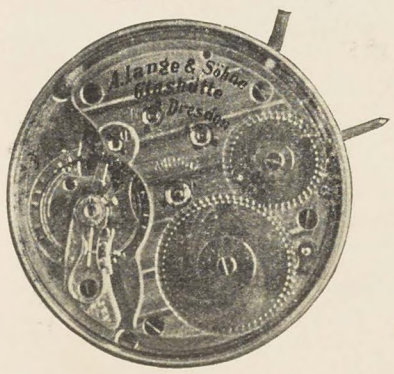
Is it good judgment; is it good business?

We guarantee every pin we sell to give satisfaction and we stand back of every statement we make.

Why don't you sell Pins that people know about—Pins that are advertised in every worthy magazine in America. We are creating a demand for Bastian's Pins and Badges; why don't you get some of the profits that demand brings?

We give large discounts; we protect and co-operate with the retailer in every way possible. We get up special designs and furnish estimates free of charge. Why not send for catalog and terms right now?

BASTIAN BROS., R 21 South Avenue, Rochester, N. Y.



A. Lange & Söhne

Glashütte Saxony

Established 1845

Founders of the Precision-Watch Industry of Saxony.
Awarded 28 First Prizes from the World's greatest exhibitions.
Also Jurors at the World's Fair, Paris, 1900

St. Louis, 1904

Our exhibit of Watches and Movements suitable for the American market is to be seen at the German Section in the Varied Industries Building

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Jurors, Non-Competitive at the World's Fair, St. Louis, 1904

Established 1856

VOGELEY & LACKMAN

Manufacturers of

French Mirror Plates

OF EVERY DESCRIPTION

239 to 259 Union Ave., BROOKLYN, N. Y.

High-grade Mirrors for Gold and Silver Mounting our Specialty
Finest Convex and Concave Mirrors. Beveled Plates for Clock Cases

SATISFACTION GUARANTEED **A TRIAL ORDER SOLICITED**

Heads are All the Go, and Selling

We have new and beautiful designs in Rose and Green Gold. Also new and splendid designs in Crosses, just out. SEND FOR SELECTIONS.

Est. 1849 *Inc. 1901*

THE WM. C. GREENE CO.
Manufacturers of GOLD JEWELRY
101 Sabin St, Providence, R. I.

ESTABLISHED 1870

INCORPORATED 1904

H. D. MERRITT COMPANY

Manufacturers of

New York Office
9, 11, 13 Maiden Lane

Superior Quality

MERIT

Gold Filled Chains

Represented by
MR. DONALD LE STAGE

FACTORY
NORTH ATTLEBORO, MASS.

New York Office
MR. FRANK B. BYRNS

WINTER MADE IT WHICH SIGNIFIES IT IS RIGHT.

"Winter" is not the cheapest, but "Winter" goods are right. If you want the best at prices that are right, write "Winter" for

WINTER'S ENCYCLOPEDIA AMERICANA
STORE FIXTURES AND FITTINGS.

The Finest and Most Complete Book of its Kind Ever Issued

Plans, interior views, new suggestions, separate fixtures, cases, counters, floor cases, soda fountain fixtures, tables, chairs, desks, specialties, etc. Illustrated fully, described and listed in so plain a manner that you can make your own plans and estimate the cost of your fixtures.

Sent postpaid on receipt of 25 cents

We do not claim to be the largest in the world, but we are proud of our factory, our reputation and our line. We do claim to make the best, at prices that are right. Not how much, not how cheap, but how good. Ask our customers. If you want good, practical, substantial, ahead-of-the-times fixtures, write us.

M. WINTER LUMBER COMPANY

Established 1865 — SHEBOYGAN, WIS.

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IS IT FROM WINTER? — THEN IT IS RIGHT.

Solid Gold Scarf Pins

with selected Baroque Pearls

$12 Dozen

SCOFIELD & DE WYNGAERT

Manufacturing Jewelers

Sales Office
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48=50 Walnut St., NEWARK, N. J.

THE FINEST WATCH, CLOCK and CHRONOMETER OILS IN THE WORLD

Used by all the leading watch factories and by all watchmakers who value their work. Sold by all tool and material dealers

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BEFORE

Established 38 Years

Watch Case Making, Repairing Remodeling and Reconstructing

Old English and Swiss Cases Changed to Fit American Stem-Wind Movements.

Engraving and Engine-Turning. Gold and Silver Plating. Satin-Finishing and Polishing.

SEND FOR PRICE-LIST

MINIATURE PORTRAITS

N. J. FELIX

18 John Street, New York City

AFTER

1522

Another Unique Novelty

in Sterling Silver Hat Pins

A RUGBY SET

consisting of Two Sterling Silver Hat Pins, symbolical of the game, on a Leather Foot Ball Hat-Pin Holder, with a scene of the game burned on.

A silk ribbon bow in the colors of the different colleges or cities desired, with the name of the college or city burned on **gratis.**

Our **Fall Line** of Sterling Silver Hat Pins, Brooches, Belt Pins, Links, Fobs, Scarf Pins, Waist Sets, Golf Sets, College Pins, Collar Pins and Novelties is the best by far that we have ever produced.

Write for samples before placing your orders.

IT WILL PAY

Rothschild Brothers Company

ORIGINATORS OF SUCCESSFUL NOVELTIES

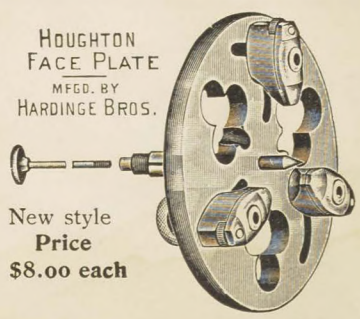
Attleboro, Mass.

IF YOU WANT THAT FULLY SATISFIED FEELING SEND US YOUR NEXT PACKAGE

JEWELRY REPAIRING JEWELRY

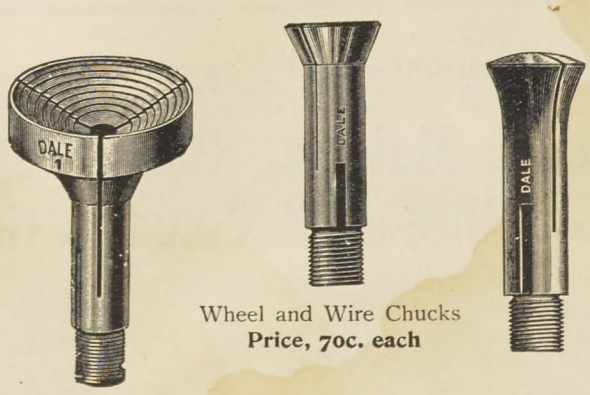
THE A. P. CRAFT CO., No. 10 N. PENNSYLVANIA ST., INDIANAPOLIS, IND.

STICKERS FOR THE ASKING



New style
Price
$8.00 each

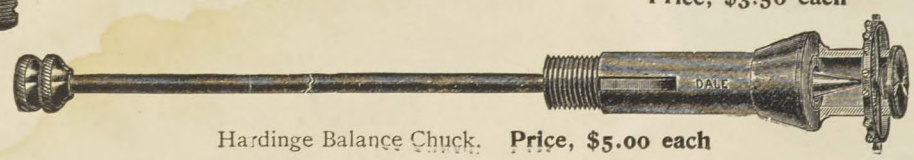
Tools illustrated in our **No. 5** catalogue are designed to save **time** and **money**



Wheel and Wire Chucks
Price, 70c. each

Write for Our Number 5 Catalogue

Carborundum Wheel and Mount
Price, $3.50 each



Hardinge Balance Chuck. **Price, $5.00 each**

HARDINGE BROS.

1036 Lincoln Ave., Chicago

Our 700-page Catalogue and Supplements will be sent free upon application.

Our Motto: Accuracy and Dispatch

SWARTCHILD & COMPANY,

1523 Established 1870

Exclusive Watchmakers' and Jewelers' Supply House

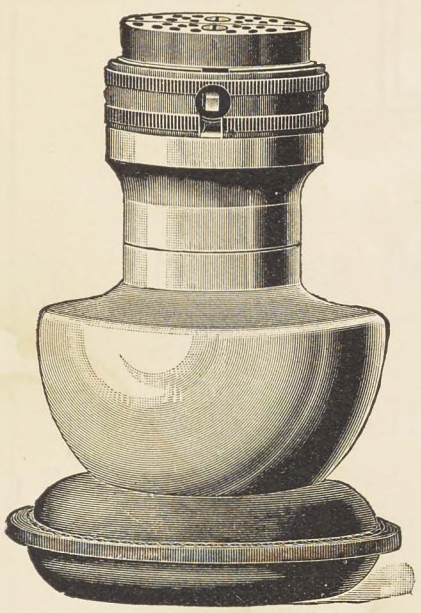
Jewelers' Building, 134-138 Wabash Ave., CHICAGO

SAM'L SWARTCHILD J. G. SWARTCHILD E. G. SWARTCHILD W. G. SWARTCHILD

OUR "PERFECT" ENGRAVING OUTFIT

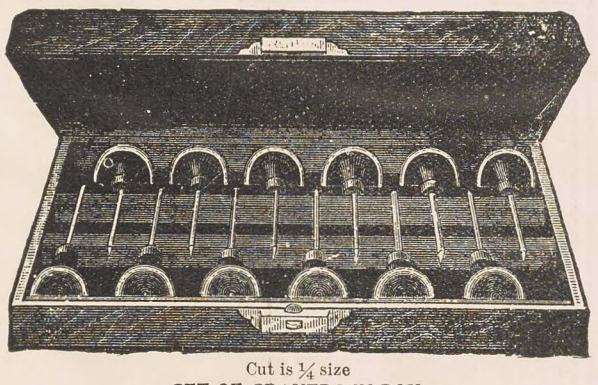
This outfit comprises all the necessities for a beginner who wants to learn the art of engraving. The SPECIAL DUPLEX BASE ANTI-FRICTION ENGRAVING BLOCK surpasses all others in value. Designed by an engraver for engravers.

It has the Monarch Adjustable Anti-Friction Bearing. Both jaws swivel, a great advantage when holding articles of irregular shape. The base is not bowl-shape, but is turned to a perfect half sphere, consequently you get the right swing and curve when operating the block. The Attachments comprise 26 parts of superior design. It is not a cheap article, but a High-Class Block in every way, including attachments and leather pad.



ENGRAVING BLOCK

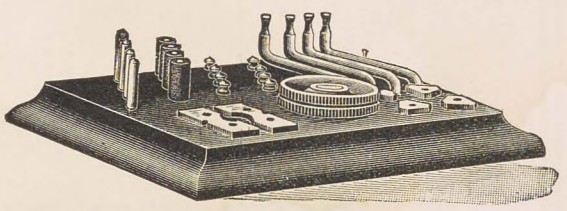
INDIA OIL STONE IN BOX, 5 x 2



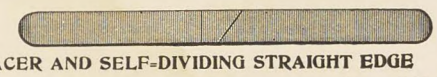
Cut is ¼ size

SET OF GRAVERS IN BOX

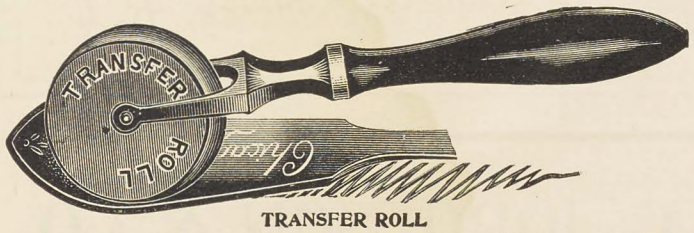
Set of 12 Gravers consists of 2 square, 3 flat, 1 lozenge, 1 knife, 1 onglette, 2 half-round, 2 lining



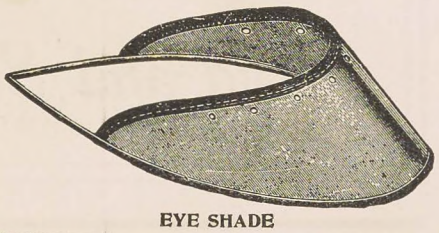
ENGRAVING BLOCK ATTACHMENTS



DUPLEX TRACER AND SELF-DIVIDING STRAIGHT EDGE

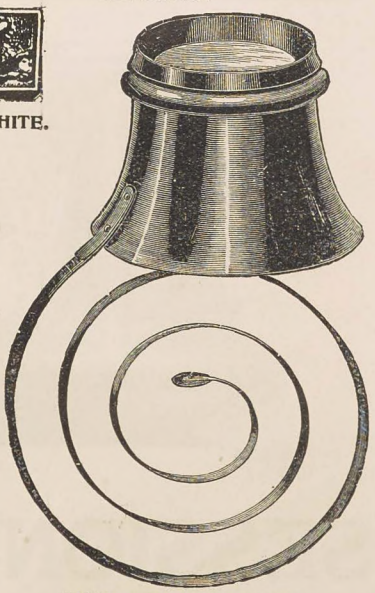


TRANSFER ROLL

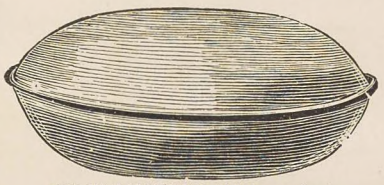


EYE SHADE

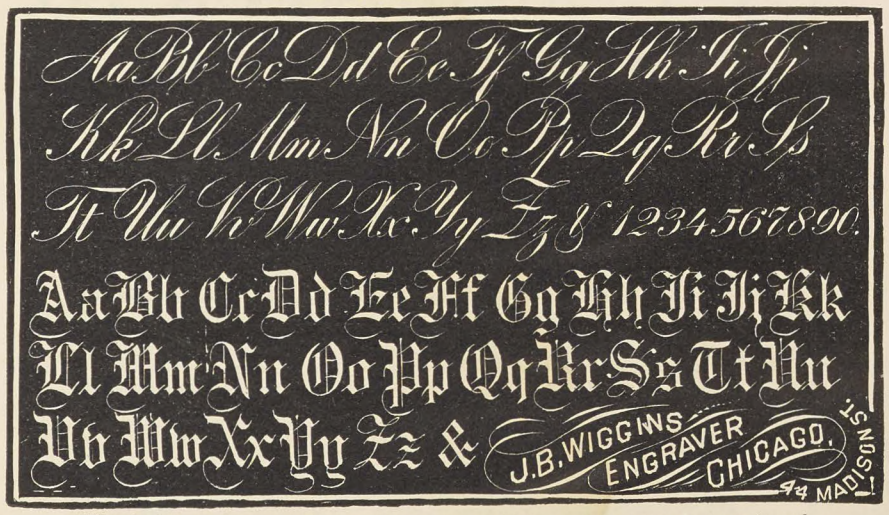
CHINESE WHITE.



EYEGLASS, WITH SPRING

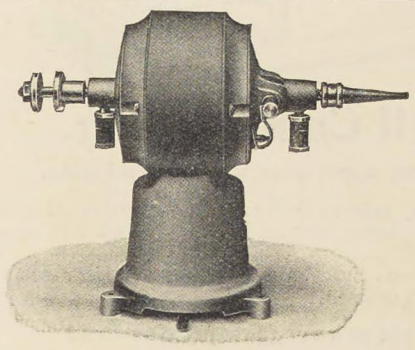


SOLID LEATHER PAD. 5-inch



Wiggins' Hand-Engraved Copper Plate, from which any letter may be transferred to the article you wish to engrave

No. F184. Price, outfit complete, as illustrated and listed, $13.00 net. **Any article ordered separately will be charged at regular price**



This shows our Latest Improved "Perfect" Polishing Motor. Direct Current Only

The body of motor is a solid circular casting, and speed regulator is placed in base. This makes a neat and compact buffing machine, which can be placed in any part of your store. The shaft is made of tool steel, hardened and ground to fit bearings. It also has self-oiling under-feed oil cups.

This motor requires no special wiring, just remove one of your incandescent lamps and screw plug into socket and motor is ready for use.

This motor has ample power for buffing watch cases, jewelry and silverware.

When ordering, do not fail to give voltage.

No. G101. Complete with cord and plug **$26.00**

Our "Perfect" Engraving Outfit consists of the following:

As illustrated	Regular Price
Special Duplex Engraving Block	$6.00
Solid leather pad, 5-inch	.50
½ doz. nickel-plated copper plates	.38
Duplex tracer	.35
Eye shade	.10
India oil-stone, in box, 5 x 2	1.00
Transfer roll	.25
Cake Chinese white	.15
Transfer wax, in iron box	.35
Eyeglass, with spring	.35
Copper engraved transfer plate	1.00
Design and instruction book	1.50
Set of 12 gravers in box	2.75
½ doz. brass practice rings	.15
Regular price, total amount	$14.83

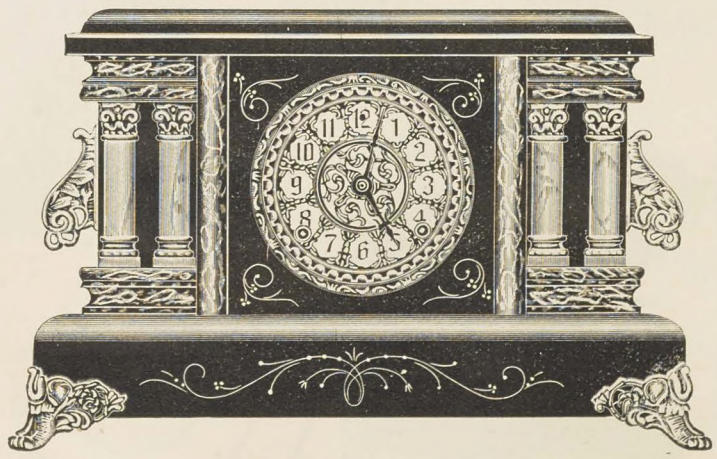
Satisfied Customers Are The Best Advertisement

We will furnish upon request a list of satisfied customers that will be most convincing. Give us a chance to add your name to our satisfied list

THE BROWN & DEAN COMPANY

Gold and Silver Refiners

102 and 104 Richmond Street
Providence, R. I.



SESSIONS CLOCKS

Superior Finish **Reasonable Prices**
Substantial Movements **Excellent Timekeepers**

We have made EXTENSIVE ADDITIONS to our factories and largely increased our facilities.

We call your attention to the extra QUALITY and to the VARIETY of DESIGNS in our MARBLEIZED CLOCKS which we believe are the BEST on the MARKET. Write for Catalogue.

The Sessions Clock Co.

Successors to E. N. WELCH MFG. CO.

Manufacturers of

Marbleized Wood, Oak Mantel and Office Clocks

Main Office and Factories

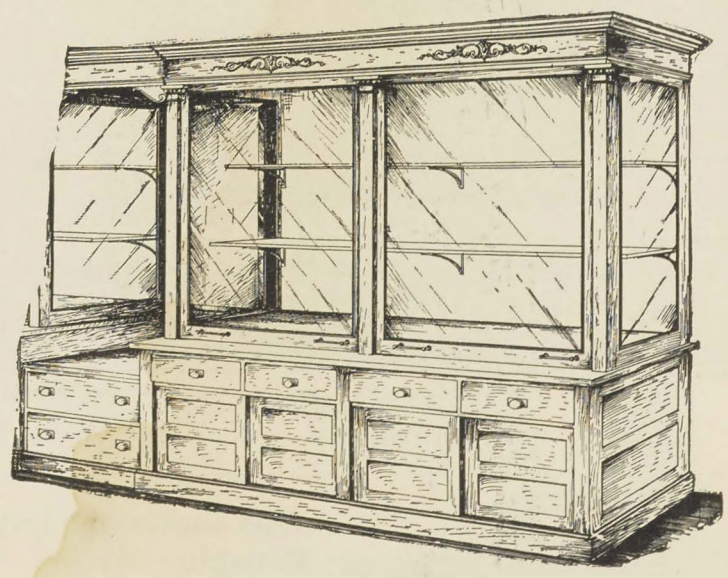
FORESTVILLE, CONNECTICUT, U.S.A.

New York Salesrooms, 37 Maiden Lane

F. C. JORGESON & CO.

208 & 210 W. Lake St., Chicago,

MANUFACTURERS.



Colonial Wall Case No. 123.

8 ft. long, 8 ft. high outside, upper part 18 in. deep inside.

Made of oak, golden oak finish, rubbed down by hand, doors slide up, glazed with heavy double-thick glass, inside of case lined with dark felt, upper part made in K. D. to save freight.

This case can be made continuous by adding plate-glass mirror section between, thereby securing any length desired.

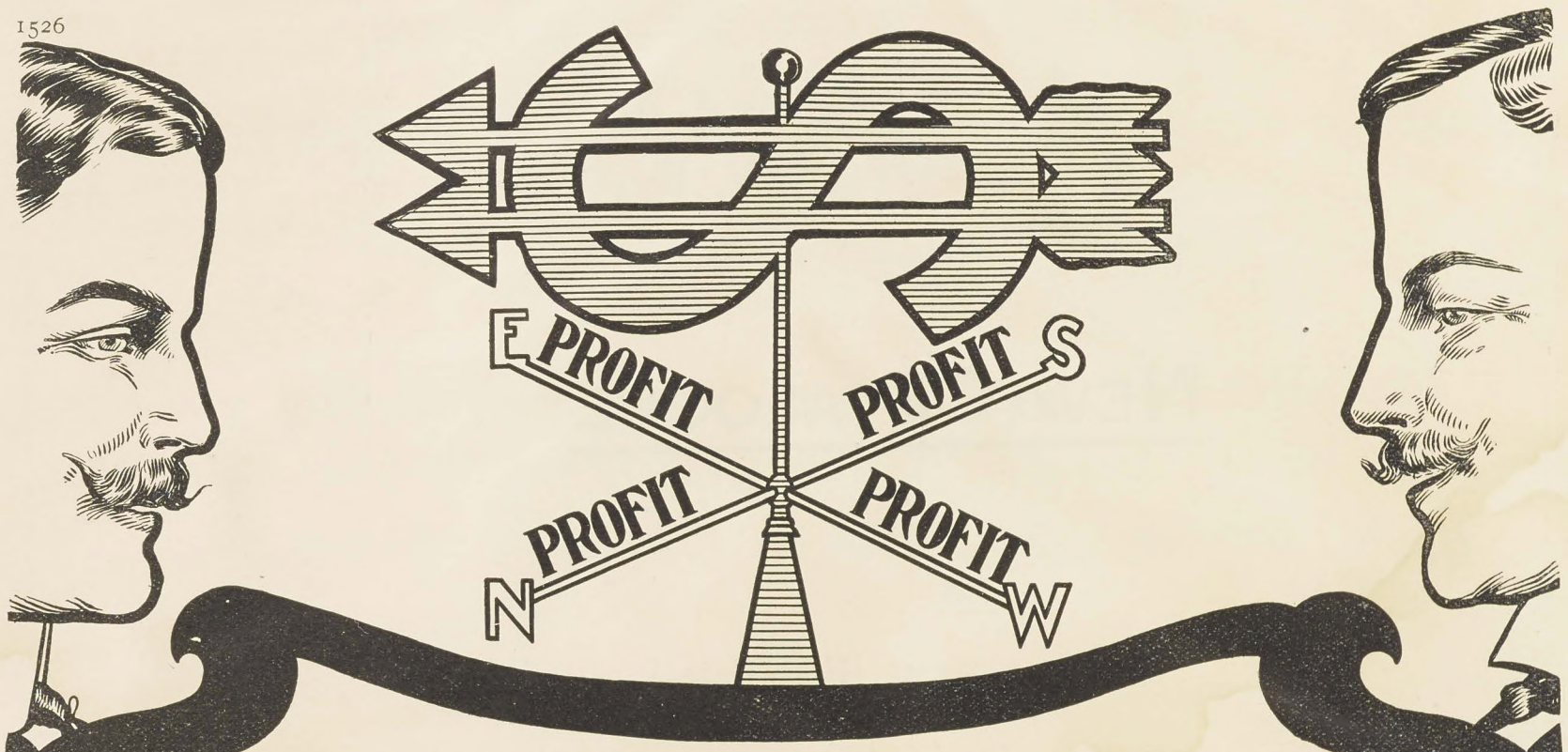
This is a high-grade Case sold at a very low price as an ad.

Write for illustrated circular. **"THE BEST OF EVERYTHING."**

NEW CATALOGUE

Our new illustrated catalogue of Spectacles and Eyeglasses is now ready for distribution to the Trade. If you desire a copy please send us your business card and the name of your principal jobber.

T. A. WILLSON & CO.
MANUFACTURING OPTICIANS
READING, PA.
ESTABLISHED 1870



Whichever Way The Wind Blows

The financial weather will always be pleasant in your vicinity if you send all your orders to us.

This month we want to call your particular attention to Clocks, Bronzes, Cut Glass and 1847 Flat Ware.

Our New Catalogue will show you that we handle the best selling clocks of all prominent manufacturers. Nothing that is worthy or desirable in the line of clocks is missing from our big stock.

We are also distributing agents for the 1847 Flat Ware, and carry a representative and complete line of the products of this company.

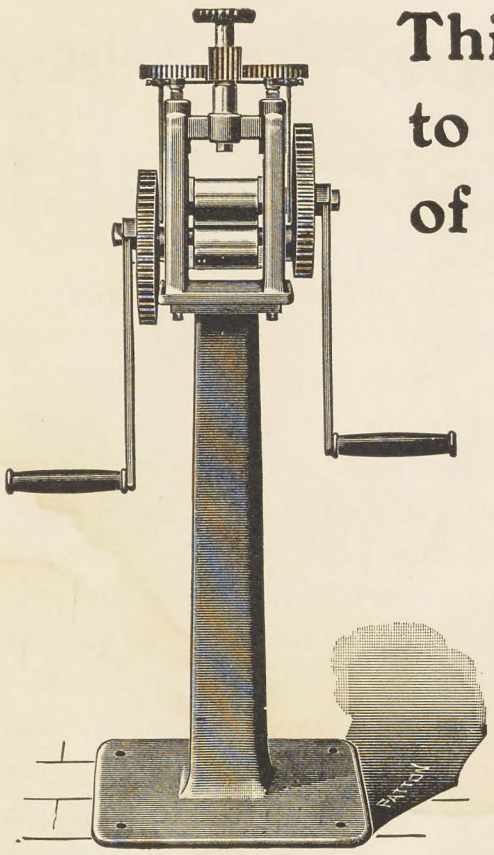
Our line of Cut Glass is a carefully selected and exhaustive one—none better anywhere.

Our new illustrated catalogue is now ready. Write for one.

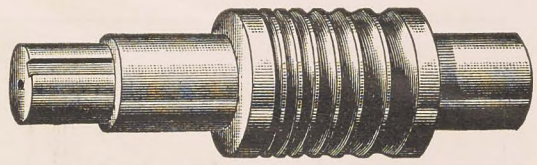
ALBERT BROTHERS

Wholesale Jewelers

N. E. Cor. Fourth and Plum Sts. **CINCINNATI, OHIO**



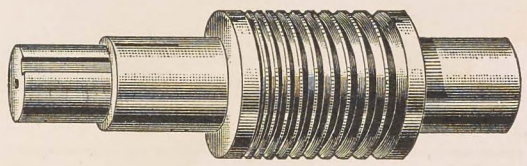
This is a good time to invest in a line of New and Improved Machinery



We can furnish complete outfits for Jewelry Manufacturing

Send in your old rolls and have them reground and polished

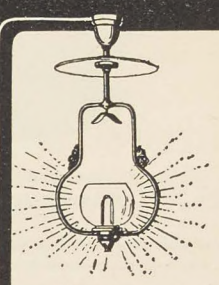
OUR LATEST CATALOGUE IS READY



The W. W. Oliver Manufacturing Co., Manufacturers

1490-1492 Niagara Street, **Buffalo, N. Y., U.S.A.**

More Light

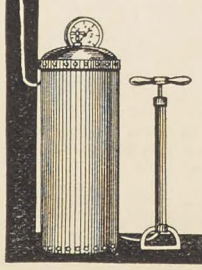


TWO STORES in the same town. Both equally good, and each carries a stock of goods that compares very favorably with the other. In the daytime both stores look pretty much alike, but at night one shows up with the brilliancy of noonday inside, while the other is but poorly lighted.

WHICH STORE DO YOU THINK WILL WIN OUT?

If you want the best light possible for your store, for about one-tenth the cost of gas or electricity, write for full particulars about the

Ann Arbor Gasoline Lighting System



Bright as day, clean, convenient, cheap.

Our Special Introductory Offer will interest every merchant who believes in modern methods. Write for it to-day. Our catalogue shows a full line of Independent Arc Lights and Gasoline Lamps for the house. We can use a few more hustling agents. Write for full particulars to-day.

SUPERIOR MFG. CO., 257 Second St., **Ann Arbor, Mich.**

This cut represents our Wire Display Rack, a handsome ornament for a jeweler's counter (not large and cumbersome), but neat and stylish, which we furnish free to our customers.

WE PUT CANDO UP UNDER SPECIAL LABELS FOR JEWELERS WHEN DESIRED

CANDO Silver Polish

is THE BEST in the world, it being composed of Diatomaceous Silicious Infusoria, which is procured from a lake, being forced up out of the earth by boiling springs. It is absolutely free from grit or any injurious substance. Don't be deceived by any polish that is recommended to be just as good as CANDO There are several imitations on the market. Some claim they have special devices for separating infusorial earth from the grit which it contains, etc. (all old methods).

Recommend and sell to your customers a polish that never has any grit, but a reputation. The Patent Top Jar used for CANDO is an up-to-date package, and can be resealed after being opened, which is important.

Paul Mfg. Co., Boston, Mass.

War Prices

We Set Stones in Ladies' Rings for 3c.
We Set Stones in Gents' Rings for 7c.
We Make Rings Smaller for - 8c.

EXACT SIZE OF STONES

Order Your Stock of Stones

FIRST-GRADE DOUBLETS				BEST HUNGARIAN OPALS			
ROUND		OVAL		ROUND		OVAL	
Size	Price	Size	Price	Size	Price	Size	Price
1–10	3c.	3 m/m	6c.	1–6	4c.	3 m/m	6c.
11–15	4c.	4 m/m	7c.	7–8	5c.	4 m/m	14c.
16–20	5c.	5 m/m	8c.	9	7c.	5 m/m	19c.
21–25	7c.	6 m/m	9c.	10	9c.	6 m/m	39c.
26–30	11c.	7 m/m	12c.	11	12c.	7 m/m	60c.
31–35	15c.	8 m/m	16c.	12–15	20c.	8 m/m	91c.
36–40	20c.	9 m/m	20c.	16–17	27c.	9 m/m	$1.41
41–44	28c.	10 m/m	26c.	18–21	35c.		
				22–23	45c.		
				24–26	70c.		
				27–29	84c.		
				30–31	$1.03		
				32–34	1.22		
				35–36	1.40		

SEND US YOUR RING REPAIRING

All repairing sent out same day as received

Terms—January 1, 1905, net

The Queen City Ring Mfg. Co.

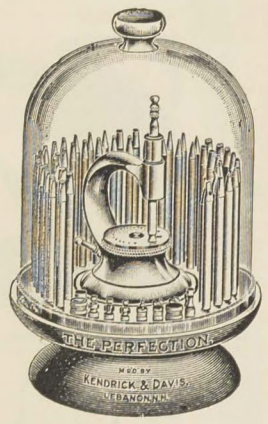
Beecher Building, BUFFALO, N. Y.

K. & D.

Manufacturers of

Staking and Other Tools

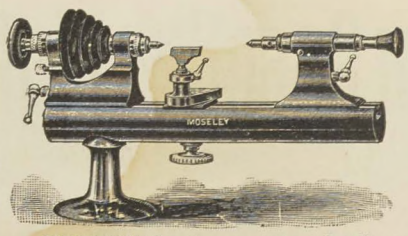
for Watchmakers and Jewelers



Send for new Catalogue No. 5

KENDRICK & DAVIS, Lebanon, N. H.

MOSELEY



Has been spending his time for many years in making **MOSELEY Lathes** as good as Lathes can be made.

Nothing is overlooked in their manufacture and no expense is spared to make **Everything** about them **Right.**

It's no wonder that **MOSELEY Lathes** are **Good Lathes.**

They are the result of years of painstaking, systematic and skilled endeavor to satisfy the exacting requirements of the most critical and experienced workmen.

MOSELEY Chucks are of **Best Quality** and are made in all sizes, covering every need of the Expert Watchmaker and Repairer, and at the present low prices a very complete assortment of Chucks may be had at very moderate expense.

MOSELEY Lathes with MOSELEY Chucks and Plenty of them are the **Secrets** of rapid, accurate and therefore **Profitable Work.**

Write your Jobber for **New List,** or to the Manufacturers,

MOSELEY LATHE CO.

Elgin, Ill., U.S.A.

SKILLED WATCHMAKERS

Were never in greater demand than to-day. When we say skilled we mean the class of artisans turned out by our school, most of whom have good positions awaiting them and frequently a choice of positions.

BE YOUR OWN BOSS

Start in business somewhere, and besides doing all the watch work in your vicinity, carry a stock from the sale of which you can make a profit at the same time. We graduate Watchmakers, Engravers, Opticians, perfecting the pupil in all three, where the intention is to go into business for himself.

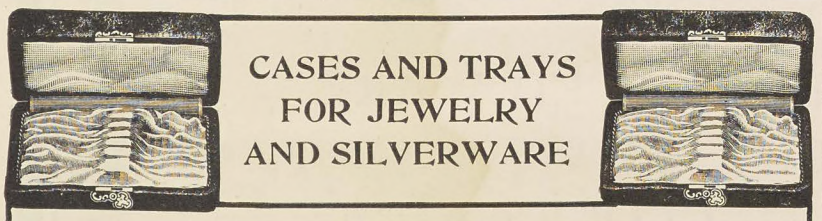
MAKE MONEY

There is always room at the top in this profession as in every other, and the one who receives our diploma has no difficulty in getting there. Send for circular now and look into the matter a little. It may be the turning point in your career.

On the very tip top is where you will find the

Waltham Horological School

Waltham, Mass.



CASES AND TRAYS FOR JEWELRY AND SILVERWARE

A handsome case or tray is a silent salesman, a certificate of character, an eloquent pleader for the article or articles it contains. Handsome cases give tone to the goods, impress purchasers favorably and make sales more profitable. Do you fully appreciate their value to you? We are the leading manufacturers of **Boxes, Cases, Trays, Chests,** for watches, jewelry and silverware. We have qualities and grades to suit all jewelers. Write or call.

L. WEIL & SONS

Manufacturers of Cases, Trays and Chests for Jewelry and Silverware

Send for Catalogue — **32 Maiden Lane, NEW YORK**

STAR BRAND
AMERICAN MAINSPRINGS
BEST ON EARTH
TRADE MARK

Prices and Quality Right

★ **"STAR" Brand American Mainsprings.** Extra quality, fine crocus finish, correctly gaged; made of the finest special steel; the tips are fitted perfectly. Price per dozen, **85c.** net cash; price per gross, **$9.50** net cash.

SPECIAL. We will give an elegant **Solid Oak Mainspring Cabinet,** with (20) drawers, worth $6.00, with your first order for 1 gross of **"Star" American Mainsprings,** assorted to suit, for **$10.50** net cash.

★ **"STAR" Brand American Balance Staffs,** extra fine, made by the latest improved automatic machinery, correctly gaged, special 7 Jewel grades, **90c.** 15 Jewel grades, polished, **$1.15.** 17 Jewel grades, polished, **$1.35** per dozen, net cash.

★ **"STAR" Brand American Balance Hole Cock and Foot Jewels in settings,** made by automatic machinery correctly gaged, special, per dozen, **90c.** net cash.

★ **"STAR" Brand American Roller Jewels** that will fit properly, **25c.** per dozen; special, **$2.50** per gross net cash, including **Oak Cabinet with 12 bottles.**

★ **"STAR" Brand American Long Case Screws** that will fit properly, **20c.** per dozen; special, **$2.00** per gross net cash, including **Oak Cabinet with 12 bottles.**

All the above prices are strictly **NET CASH.**
Orders filled in rotation as received.

H. B. Peters & Co., 177-179 Broadway, New York

THE W. J. FEELEY COMPANY

Ecclesiastical Art Metal Workers

MEDALISTS

203 Eddy St., Providence, R. I.

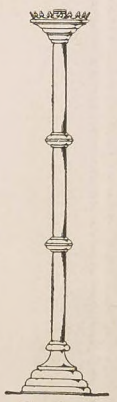
Full size

Crucifix No. 3221
Sterling Silver, **$1.00** each
French gray finish

Gothic Design.

Chalice No. 1811
Height, 9 inches
Sterling Silver, **$50.00**

In Brass



No. 2114
Height, 60 inches
Price, **$18.00**

Catalogue on application.

ROSARIES.

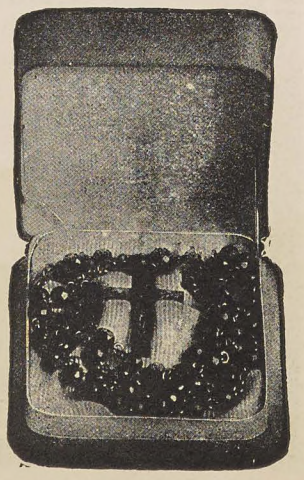
IN PURE AND IMITATION STONE.

In Pure Stone—Amethyst, topaz, garnet, crystal, onyx.

Prices—Mounted in solid gold, **$20.00** each and upwards. Mounted in rolled gold-plate, **$10.00** each and upwards.

In imitation Stone—Amethyst, topaz, garnet, emerald, crystal, turquoise, opal, moonstone.

Prices—From **$1.50** each and upwards.



ANNOUNCEMENT

We beg to announce that we will deliver to the JEWELRY TRADE, on or about October 10th, our

Standard Annual Illustrated Catalog for 1905

(39th Issue)

We believe our new 1905 issue surpasses any previous effort of ours in this direction, because of its

Completeness, Variety and Classification

Great care having been used in selection; only the best styles and most salable goods are shown from among our large Fall stocks. IT IS COMPREHENSIVE IN THAT IT CONTAINS

ALL THAT A JEWELER NEEDS

embracing complete lines from our large stock of

DIAMONDS
WATCHES
JEWELRY
SILVER-PLATED WARE
CUT GLASS
CLOCKS
SILVER NOVELTIES
OPTICAL GOODS

and a complete line of TOOLS and MATERIALS

A distinct classification of qualities exists throughout, quotations being honestly made; and prices as low as are consistent with quality or competition requires, **which means we are as low as the lowest.**

Mail orders receive **prompt** and **intelligent** attention, being dispatched the same day received.

If by oversight you do not promptly receive our new 1905 Catalog, write for it.

Remember its distribution is confined solely to the Legitimate Jewelry Trade, a fact worthy of your consideration. You will need this book—if you have it you will surely use it to profitable advantage.

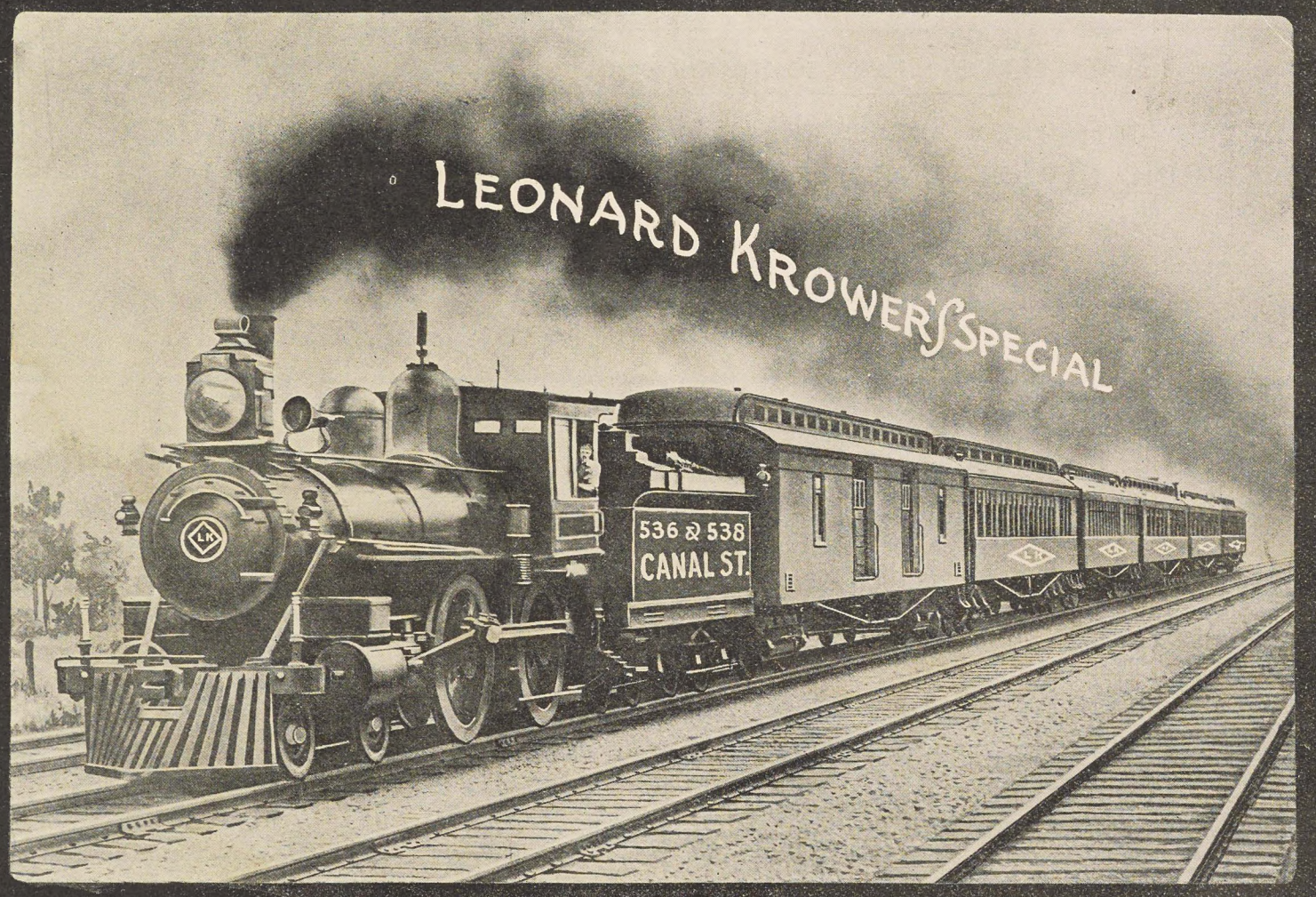
With best wishes to the trade for a prosperous season's business, we remain

Yours truly

NORRIS, ALISTER & CO.

Established 1865

134, 136, 138 Wabash Ave., CHICAGO, ILL.



OUR SPECIAL

LEAVES DAILY from any City in the United States

It will only cost your time to come to New Orleans. For this you will be **amply remunerated** by having **the unexcelled opportunity of inspecting a stock second to none—an exposition in itself, and a money-saver.**

Hand-Painted	*Carlsbad*	*Bronzes*
French China	*Novelties*	*Cut Glass*
Parisian Goods	*Sterling Silver*	*Medallions*
Vienna Goods	*Silver Plate*	*Clocks*
Dresden Ware	*Bric-a-Brac*	

LEONARD KROWER,

WHOLESALE MANUFACTURING JEWELER AND OPTICIAN

Importer and Exporter

536-538 Canal St., NEW ORLEANS, LA.

1904

No Well-Informed Jeweler

Doubts the desirability of

The "Bryant" Rings.

as a prominent part of his stock. They are always of **standard quality** and **desirable styles** at a price that affords the **Retailer** a good profit

Don't wait for our travelers but order, for selection or otherwise, direct from

TRADE MARK

M. B. BRYANT & CO.

7 Maiden Lane, NEW YORK

"South Bend" Demagnetizers

ORDER FROM YOUR JOBBER.

PRICES:
For Direct Current, $15.00
For Alternating " 5.00

Agents for England, GRIMSHAW & BAXTER, 29 Goswell Road, London, carry stock.

THE MILLER-KNOBLOCK ELECTRIC MFG. CO., South Bend, Ind.

C. T. CUNY AND COMPANY

78-80 STATE ST., CHICAGO, ILL.

MANUFACTURING JEWELERS AND ENGRAVERS

REASONS why we are the BEST FIRM to do the Country Jewelers' Work.

- Because—All jobs go back the same day.
- Because—Every job is done right.
- Because—Every price is low.
- Because—Every job is guaranteed.

Are You Looking { for Values? / for Styles? / for Sellers?

Our line contains all of these advantages
A selection package will prove it

J. ENGEL & CO., BALTIMORE

"JEWELRY FOR THE JEWELER"

LANDIS SCHOOL OF ENGRAVING.

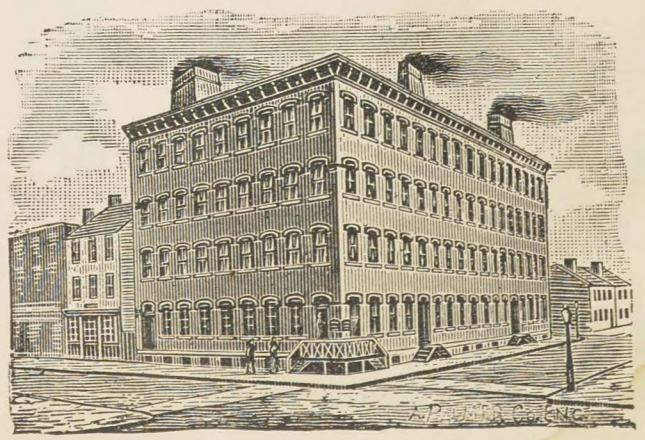
OUR NEW SCHOOL ROOM. Full Class of Twelve Pupils.

WRITE US. Some of our pupils are just finishing their Course and we will have room for others. Now is the best time to enter.

Correspondence solicited.

M. L. LANDIS, 119 Koch Ave., DETROIT, MICH.

L. LELONG & BROTHER



Gold and Silver REFINERS, ASSAYERS and SWEEP SMELTERS

BULLION SOLICITED

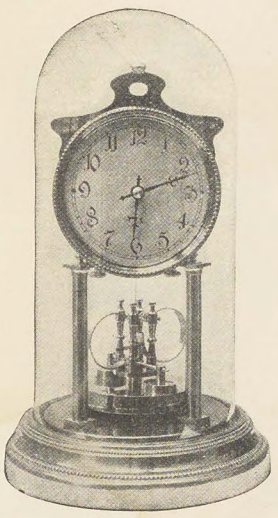
SMELTING FOR THE TRADE

SWEEPINGS OUR SPECIALTY

Prompt attention given to Old Gold and Silver forwarded to us by mail or express

Southwest Corner
Halsey and Marshall Sts.

Newark, N. J.



Insist Upon Getting

The Special Year-Long

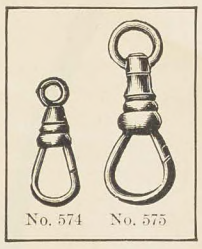
with large silvered metal dial and compensated pendulum

The "Just as good" won't do

J. B. BECHTEL & CO., Importers

725 Sansom Street, Philadelphia, Pa.

CHEAPEST SOLDERLESS SWIVEL ON EARTH



NO SOLDER TO BREAK

Made in two sizes, ladies and gents. Just the thing for cheap Campaign Badges. Price for either size in one hundred gross lots is **75c. per gross, net.** In lots of less than one hundred gross, **85c. per gross, net,** F. O. B. Pawtucket.

GEO. H. FULLER & SON CO., Pawtucket, R. I.

Chicago Office—103 State Street

LIQUID AMBER

BM TRADE MARK

THE JEWELERS CEMENT

The Strongest Cement

yet discovered—much superior to Shellac or other gum or gelatine cements.

It has no equal for fixing Pallet Stones and Roller Pins, making a much stronger and cleaner job than shellac. It is quite transparent, and will successfully repair Broken Cut Glass, China, etc. The same properties make it invaluable for setting fine Pearls. It will fix a slack Watch Glass so that dirt cannot work through the bezel, and do any other job where a strong, clean cement is required.

Sold by every material dealer in America

Price, 25c.

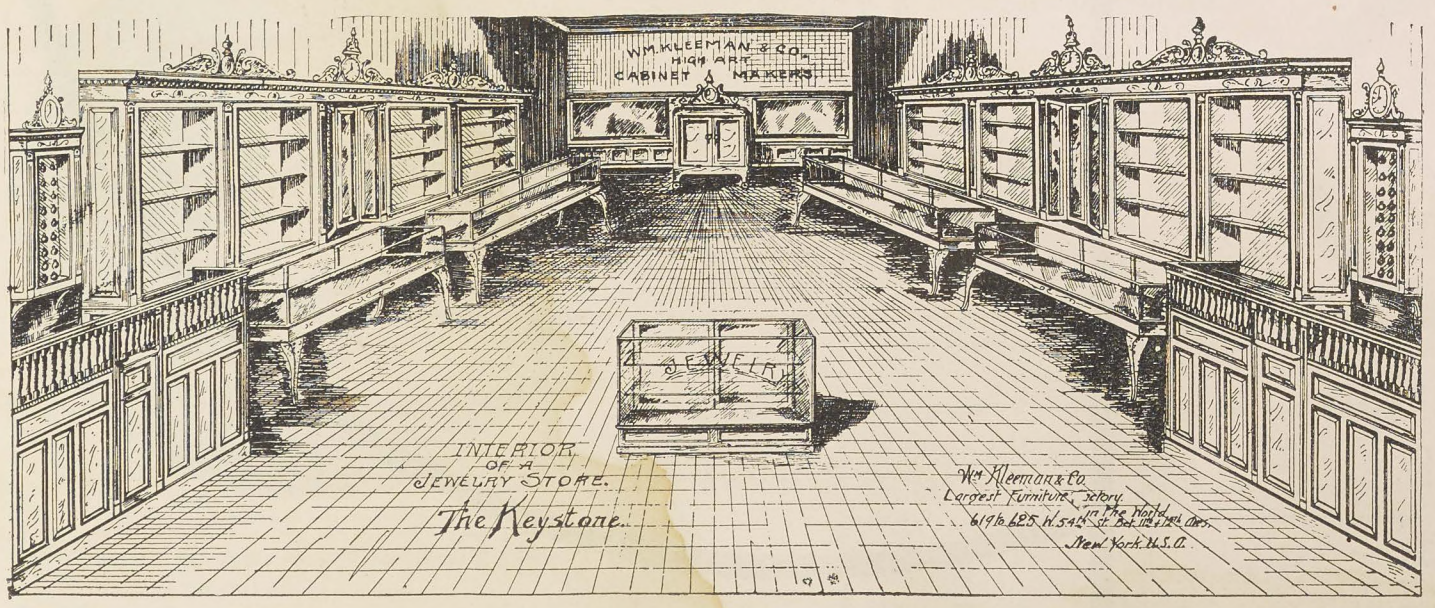
SUSSFELD, LORSCH & CO.

Wholesale Distributing Agents

37 Maiden Lane, New York

RELIABILITY—THAT'S THE POINT

when it comes to ordering **JEWELRY STORE FIXTURES**



For 43 years **Wm. Kleeman & Co.** have held the record for **High Art Jewelers' Store Fixtures MADE TO ORDER,** from plans and specifications which they prepare through correspondence or personal interviews with their experienced traveling representatives.

No regular **HAND-ME-DOWN STOCK, MODELS OR DESIGNS.**

Every piece of Store Furniture to suit the demand of the location, the business expected to be gained and **THE CUSTOMER'S POCKETBOOK.**

YOU PAY NO MORE for what you need and want and ought to get than you used to pay for ready-made fixtures, and the kind of wood or glass and color of finish is to your individual taste.

THAT'S THE KIND OF CABINET WORK WE LEARNED HOW TO MAKE.

Do you need us? If you need information, our draughtsmen are at your service. No charge for plans, designs or suggestions.

Delivery guaranteed within the time it takes the sluggish, old-time dealer to pack his stock goods, and at **REASONABLE COMPETITIVE PRICES.**

WRITE US; WE'LL TELL YOU ALL ABOUT IT

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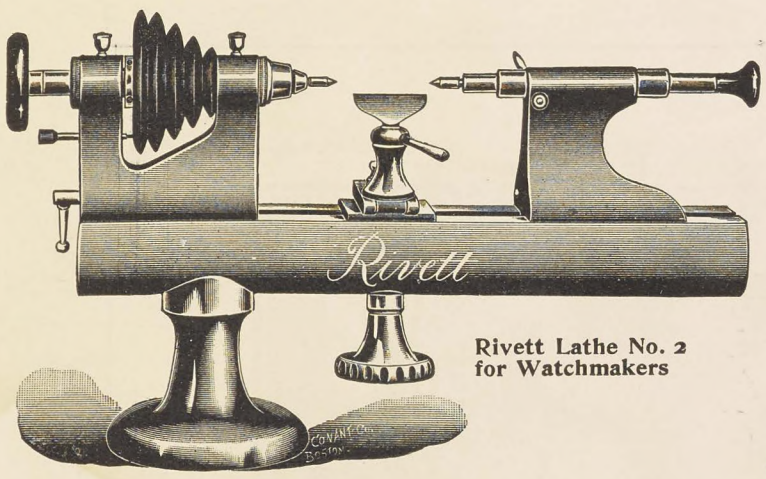
For 43 years Largest Makers of High-Grade Jewelers' Store Fixtures, Wholesale Interiors and Offices in the World

United States Movements

are
made
a
little
better
than
need
be
to
meet
the
compe-
tition
of
the
next-best

It is that "little better" which is the ground of our faith in the eventual recognition by all of the Trade of the superior claims of United States Movements———

United States Watch Co.
of Waltham, Mass.



Rivett Lathe No. 2
for Watchmakers

Rivett Lathes

Made in **2** Styles

The Rivett Lathe, steel bed as usual.
" " " with bed of Cast Iron, same as other makers use, at a lower price.

Ask Your Dealer for it

SEND FOR CATALOG

We are the makers of the BEST chucks; and this claim is upheld by the fact that representatives from two watch factories have investigated our method of grinding, with the usual result of adopting our grinders in their factories.

Chicago, Ill.

"Mr. Warner was in to-day and says he has got the finest lathe he ever saw. He stayed about an hour, telling us how fine the machine was you sent him, and seemed to be unable to talk about anything else. We do not know whether he came down from Beloit especially to see us and tell us about this, but it rather looks so, and you can feel that you have another firm in this section going out of their way a good deal to shout for your lathes. We thought you would be pleased to hear about this.

Yours very truly
HILL, CLARKE & CO."

Faneuil Watch Tool Co.

Brighton **Boston, Mass., U.S.A.**

"I learned to do **Script Engraving** in **one week** from your five-dollar course."—S. P. HALDEMAN, Watchmaker, Morrill, Kansas.

A specimen illustration

Our Home Course in Engraving teaches you to do letter and monogram engraving on jewelry, in rings, on silverware, coffin plates, souvenirs, etc. Every trick of the trade explained clearly by an expert. You can temper and sharpen a graver the first time you try it in five minutes. You can engrave straight and curved lines within a half hour. **We teach you to design every kind of monogram quickly and well; how to engrave in rings, on hard metals, transferring, pierced work and seals.** Besides the instruction book we send 3 fine gravers tempered and sharpened, oil-stone, leather pad, dividers, tallow, tool-polishing papers, steel marker, block to hold lockets, bangles, spoons, etc; tool sharpener, alphabet charts and book of 300 monograms, 12 practice plates, 6 rings and **6** thimbles for practice.

We answer questions about the work and criticise and correct plates and designs sent us by pupils free of charge.

$5.00 pays for all. No extra charges.
Cash in advance to everybody. No outfits sent c. o. d.
Testimonials from satisfied pupils for the asking.

AMERICAN SCHOOL OF ENGRAVING

Established 1901 **30 EAST 14TH ST., NEW YORK, N.Y., U.S.A.**

Aisenstein & Woronock

Wholesale Jewelers

22 Eldridge St.

New York City, N.Y.

18 L. ox. P. S. watch, **$1.85, net**

The lines we carry in stock:

Watches

American, Swiss, Ingersoll, Ansonia. — Gold, Gold Filled, Silver, Nickel, Gun Metal, Gold Plated.

Jewelry

Rings, Brooches, Scarf Pins, Lockets, Chains, Earrings, Bracelets, Links, Eyeglass Chains, Stud Sets, Emblem Pins, Crosses, Knives, Cigar Cutters, Baby Sets. — Gold and Gold Filled.

Silverware

1847 Rogers Flatware,
Wm. " "
Meriden Britannia Hollowware.

A full line of Sterling Novelties.

Movements

Trenton, Waltham, Elgin, New York Standard, Omega, Seth Thomas, Swiss,
All Special Movements on hand.

Optical Goods

Trial Cases, R. B. Frames, E. G. " E. G Mountings, Lenses. — Nickel, Filled, Gold.

Clocks

Alarm, Gilt, Kitchen, Porcelain, Bronze, Parlor, Cuckoo, Music and Novelty, — In all makes and styles.

We carry a full line of Watchmakers' and Jewelers' Materials and Tools. A full line of Findings in plate, filled and gold.

THIS IS A REPRODUCTION

of our new poster handsomely lithographed in colors, now ready to furnish the trade, with jeweler's name printed on the tint directly underneath the words, "Silver Plate that Wears."

They are the regulation size, 26 x 24 inches, and made for putting on bill boards, walls and other out-door positions. If you wish a supply, write us stating how many you will use, and they will be sent you with your name imprinted in the position mentioned.

MERIDEN BRITANNIA CO., Meriden Conn.
(INTERNATIONAL SILVER CO., Successor)

THE KEYSTONE

Vol. 25 — Philadelphia, October, 1904 — No. 10

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THE KEYSTONE

A Monthly Journal Devoted to the Interests of the Jewelry and Optical Trades.

Subscription—**One Dollar per year,** postpaid, to all parts of the United States, Hawaii, Porto Rico, Philippines, Guam, U. S. Island of Samoa, Cuba, Mexico and Canada (except Newfoundland); **single copies,** regular issues, **15 cents**; special issues, **25 cents.** To Foreign Countries **10 Shillings ($2.44) per year; single copies, 1 Shilling (25 cents).**

Payment for THE KEYSTONE, when sent by mail, should be made by a Post-Office Money Order, Bank Check or Draft, or an Express Money Order. When neither of these can be procured, send the money in a Registered Letter. **All Remittances should be made payable to THE KEYSTONE.**

Change of Address—Subscribers desiring their address changed, should give the old as well as the new address.

Advertisements—Advertising rates furnished on application. No advertisements but those of a reputable character will be inserted.

To Advertisers—Copy for advertisements must reach us by the 25th of each month to insure insertion in the issue of the following month. Notices of changes in advertisements should reach us not later than the 20th of the previous month.

All communications should be addressed to

THE KEYSTONE
19TH & BROWN STREETS
PHILADELPHIA PA.

CHICAGO OFFICE
103 STATE ST.

FOREIGN SUBSCRIPTION AGENTS

GREAT BRITAIN—ANGLO-AMERICAN OPT. CO., 94 HATTON GARDEN, LONDON, E.C.
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SCOTLAND—JOHN BAIRD, 68 MITCHELL STREET, GLASGOW.

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Holiday Number of THE KEYSTONE

THE November number of this journal will be our annual Holiday Number, with special cover design and the usual enrichment of the contents by many extra features and a wealth of appropriate illustration. The cover design on this occasion will be a radical departure from those of past years, in that it will be printed in colors. The idea of the artist is a pictorial symbolization of the sovereignty of jewelry in social life, and both the figures in the picture and the jewels and jewelry will be printed in natural tints, making the completed design probably the handsomest ever seen in any trade magazine. The extra features will be many and varied, all deeply interesting and instructive to the trade. Our past achievements in the matter of holiday issues, are sufficient earnest of the journalistic treat now in store for our readers. It is timely to suggest that all whose subscriptions expire this month renew at once, so that they may not miss this wonderfully handsome and most valuable number.

Brightening Prospects for Fall Trade

SINCE our last issue a welcome change has taken place in the business situation. September witnessed an unexpectedly rapid transition from the pronounced dullness of the summer months to an almost normal early fall business, and the wiseacres are now confidently predicting a highly remunerative season despite the disturbing influence of the presidential campaign. In their reports from various sections of the country our correspondents tell of greatly improved conditions, and all may now look forward to another prosperous holiday season when November 8th shall have passed into history.

The weekly review of R. G. Dun & Co. admirably summarizes the general situation up to date as follows: "Trade expands steadily as confidence increases with the harvesting of the crops, and mercantile collections are less tardily met. Lower temperature stimulates the demand for fall and winter wearing apparel, and there is more disposition to prepare for the future rather than to confine operations within the limit of immediate requirements. This improvement is extending to all departments of manufacture, and in the aggregate there is less idle machinery than at any recent date. Settlements of labor disputes have helped in the development of this favorable condition. Railway earnings for September were 5.7 per cent. larger than a year ago, and foreign commerce at this port for the last week shows a gain of $2,945,687 in exports, as compared with 1903, although imports decreased $713,067."

Jewels, Jewelers and Women

THE passion for jewels which seems to intensify with the acquisition of wealth and culture is the life and hope of the jewelry trade. In fact, the millionaires have in recent years converted so much of their property into the shape of jewels that the care of them has been styled "the burden of the rich." Almost every day we read in the daily press of the sudden disappearance of priceless jewels. Brooches, pearls and rings are left in cabs, hotel rooms or on wash stands. They are sometimes picked up on the stairway by butlers, or swept into dustpans by startled chambermaids. A package of jewels was recently found in the chimney of a hotel bedroom, the owner having entirely forgotten the hiding place. While humanity are so fascinated by jewels that they will willingly suffer so much anxiety rather than be without them the jewelers need not despair of their calling.

COMMENTING editorially on "the burden of the rich," or the care of their jewels, the New York *Sun* says:

> It is easy to understand why many poor people put their savings into diamonds and such. Diamonds have a certain value, which has been rising steadily in the last few years. Diamonds are easily convertible into cash and small of bulk. Some persons distrust banks and like to have their property tangible and visible always. The savage passion for decoration is still unabated. It has developed from tattooing, labrets and nose rings to the delight in precious stones, many of which are beautiful indeed, in cabinets, and few of which are safe save in safes. It is easy to understand, too, why women living in tenement houses or flats carry their jewels with them. Flat robbers are so common that the dweller in flats prefers to take her jewelry exhibit with her. Perfectly simple likewise is the obvious sociological fact that many worthy souls believe that the display of jewels at

"any old time" is a mark of wealth and distinction. Wherever you go, even in the glare of noonday, you will find noonday outglared by the "sparklers" of American women; and the face of heaven is pale with pearls.

More power to the American women, and more jewels also! As the *Sun* aptly says: "A Mere Man would dissolve in an anguish and agony of cold perspiration if he had, even concealed on him the barbaric pomp and gold of a woman's outfit of jewels. He would go mad if he had to carry the Pitt diamond in his inside waistcoat pocket for a week. Yet see how the feminine martyrs bear their splendid chains!"

Keep the women in mind, ye advertising jewelers. She is *par excellence* the instrument of your success, your bountiful benefactor. Keep her in mind when you settle down to plan your holiday campaign, and don't much longer postpone the planning.

Proposed Amendments to our Patent Laws

EXCELLENT as our patent sytem is supposed to be, it is evidently not beyond criticism. In fact, in the past year or so criticism of the system has been so forceful and frequent that a number of amendments to the law have been suggested, and at least some of these are under serious consideration. One of these proposes the extension of the patent term under certain circumstances. While, usually, the term of seventeen years, which is the period of the grant of a patent under our present law, is sufficient to recompense an inventor, it is found that, in particular cases, because of lack of capital, the necessity of using the invention in connection with another patented device the patentee of which will not make reasonable terms, the difficulty in procuring raw material, or other causes, inventors have been unable to receive the expected return, and that in those cases to do justice it is necessary to extend the otherwise definite term in which they may reap their reward.

Some forty or fifty years ago our patent laws permitted patentees who, through no fault of theirs, reaped no reward from their patents in the seventeen years, to have the term extended. Such a privilege can now be granted only by special act of Congress. An effort is now being made to have the law so amended as to permit an extension of the term under the circumstances named and with good hopes of success.

THE editor of *The Electrical World and Engineer* calls attention to another "conspicuous defect" in our patent laws, viz., that under our present law patents may be granted without requiring that the patent devices be worked even in the most perfunctory fashion. If this be a defect it is certainly on the side of the inventor, and yet there is much reason in the argument of our contemporary. It is quite true that at the present time an investigation in any line discloses large numbers of more or less conflicting patents running back over a long term of years. Of these very few are fundamental in their bearing upon the art. Most of them are interlinked with their predecessors in a more or less complicated fashion and belong in the category of improvements. But of the whole mass of patents, primary and secondary, only a very small percentage have any record of practical usefulness. The vast majority is composed of patents unsuccessful and entirely unworked, or of patents taken out for purely defensive purposes, and never seriously intended to be worked. The result is that the inventor honestly striving to produce an article of industrial importance continually finds his way blocked by prior patents touching his invention, more or less remotely, but still sufficiently in the way to hinder material improvements or to control them if made. Even if the way be not completely blocked, it is so far obstructed as to make it difficult to get proper claims, or even claims sufficient actually to protect the new invention.

This is certainly a condition well worthy of the consideration of all who are seriously interested in our patent laws. One thing must be kept in mind, however. Our present postal laws err, if they err at all, on the side of the inventor, and it would be a great mistake to make any restrictions which would limit his activity.

A Floating Exposition of American Goods

AN entirely new departure in the exploitation of American products in foreign lands will be inaugurated in the middle of November, when a big ocean steamer will start from Seattle with a cargo of American goods which will be exhibited at the principal ports in Asia, Australia and the western coast of South America. Aside from the crew the only persons who will be on this ship will be exhibitors, and the only goods will be the exhibits. The present plan is to have this exposition stop at the ports of Yokohama, Kobe, Nagasaki, Shanghai, Hong Kong, Manila, Singapore, Mauritius, Delagoa Bay, Cape Town, Adelaide, Melbourne and other places on the other side of the Pacific, and touch at Valparaiso, Callao and other points in South America on the homeward swing. Port Arthur and Vladivostok, too, will be visited if military conditions permit. From two to ten days, it is proposed, will be consumed at each port. The entire swing around the circle will take six or seven months, according to present calculations.

THIS is bringing the mountain to Mahomet for a certainty. If the foreigners do not find the time or opportunity to visit our fairs we will, in a fashion, take our fairs to them. The new project has a wealth of capital to back it, as its promoters are James J. Hill, of the great Northern Railway, and many other men of wealth. This floating fair is yet another evidence of the wonderful development and progress of the far West and the enterprising spirit which animates that section. It recognizes its opportunity on the Pacific and in the Orient, and is taking practical steps to get a safe foothold in the South American and Asiatic markets.

Jewelers' Organizations Abroad

WE have before us a report of the recent annual meeting of the German National Association of Goldsmiths, and after its perusal we can only regret that our own jewelers cannot come together in an equally influential and useful organization. The report credits the association with a membership of nearly 2000, and its sphere of activity covers not merely abuses, but such important matters as insurance, financial help for indigent members of the trade, etc. To indicate the activity and practical methods of the organization it is only necessary to refer to its efforts to combat the extreme cutting of prices of flatware and kindred goods which, in Germany as in the United States, are sold by some houses at so small a profit that considerable price demoralization sometimes results. These houses, which are situated in large cities such as Berlin, Frankfort, Hamburg, etc., sell these goods nearly at wholesalers' prices with a view of obtaining orders for other jewelry, and hoping that by high prices for the jewelry they make up for the loss on the spoons and forks. The Goldsmiths' association does not consider this way of doing business a fair one, and, therefore, has undertaken to energetically fight against it. It has succeeded so far that the provincial towns of Germany have arranged that silver spoons and forks shall not be sold without a profit of about twenty-five per cent. upon the manufacturers' prices, and the majority of the latter have declared in a solemn way that they will not sell any more goods to those who are not in the agreement if two-thirds of the jewelers in a given district have signed it. This agreement being incomplete without the co-operation of the jewelers in the big cities, it was resolved that every

suitable means should be employed to make the resisting jewelers yield, or to deal with the matter entirely without them and compel co-operation.

SUCH organizations as those of the British and German jewelers are powerful agents for the suppression or amelioration of abuses, as fidelity to the association is practically all that is necessary for their prevention. At a recent meeting of the State organization of hardware dealers in Michigan, the president said: "And now, brother hardware men, begin to wake up, and do not talk so much about what catalogue houses are doing in your neighborhood. If you will talk one-half as much about the Michigan Retail Hardware Dealers' Association as you do of these catalogue houses, you would be making money instead of advertising some one else." Blunt, but excellent advice. But the jewelers of America, unfortunately, have but few such organizations, and even these seem enervated by the general indifference.

The Peasant Watchmakers of France

AS compared with the peasantry of other European countries, the peasantry of France are noted for their thrift and comfortable living. One explanation of this thrift and comfort is given in an article in a recent issue of the *Contemporary Review*. It appears that each peasant not only cultivates a highly productive piece of land, but also conducts from his farm cottage a variety of industries with products that are sold all over the world. These industries include silk, lace, pottery, embroidery, etc., but the one which most particularly interests our readers is watchmaking.

IN the magazine article referred to we are told that although watchmaking is mainly the industry of the mountainous countries to the east and northeast of Lyons, watchmakers will be found busily at work in the north of France, at and around St. Nicholas, north of Paris. Man and wife work together, and the division of labor has been carried to such an extent that hardly a single man would be able to make a completely finished watch. Chronometers are made by a master who employs four workers, and these chronometers have a name esteemed even outside of France. At Sougeons the peasants are making spectacles, telescopes and other optical instruments and earn from three to six francs a day.

THE watchmaking industry in the north cannot possibly be compared to that in the mountains east and northeast of Lyons. Cluse is a center of this trade, where 500 workers are earning their living as watchmakers, while in the neighboring villages 4000 peasants are engaged in the same business. The majority have electric power transmitted to their houses. Electricity is cheap, while only one-eighth of a horse power is required for the use of four or five laborers. This watchmaking, which yields an income to the district of 3,000,000 francs annually, is almost without exception carried on in addition to agriculture, and the electric motive power permits the workers to employ any kind of machine tool. Each village has its particular specialty, one making only wheels, another springs, and so on. A school for watchmakers is established, where about 150 pupils receive instruction for three years.

FURTHER to the northeast is Besancon, the greatest watchmaking center in France; 8000 workers at Besancon and 41,000 in the whole district are making watches. At Besancon alone 400,000 to 500,000 watches—for the greater part expensive ones—are produced, while large quantities of cases of gold and silver are also made, frequently with highly artistic engravings. Also here a school is established, and an observatory, to which is allied an institute for testing by exposure to extreme changes of temperature parts which are to be used for watches of great exactness. Around this industry various allied industries have grown up, such as the making of glasses, bracelets and bags for watches.

Installment Diamond Concern in Trouble

THE Post Office Department has issued a fraud order against the Preferred Mercantile Company, a diamond installment institution with offices in many cities, and patrons of the concern all over the country are somewhat perturbed as to how the action of the authorities will affect their relations with it. The Preferred Mercantile Company is incorporated, we understand, in the State of Massachusetts, and the Boston offices seem to be the Eastern headquarters. The methods of the concern are said to have been under investigation by the Post Office Department for some time, and final action was taken on September 17th, in Boston, when the president of the company surrendered himself to the United States marshal on a warrant charging him with violation of the postal laws in a scheme to defraud.

THE Boston *Herald* says that the business of the Preferred Mercantile Company was known as a diamond lottery, and that the Boston office did a business of many hundreds of dollars daily. There are said to be forty branch offices in different cities all over the country, and the written contracts of the concern must amount in the aggregate to a very large sum. The management evidently believed in publicity for they advertised extensively. A statement in one of the the advertising circulars explains the plan pursued:

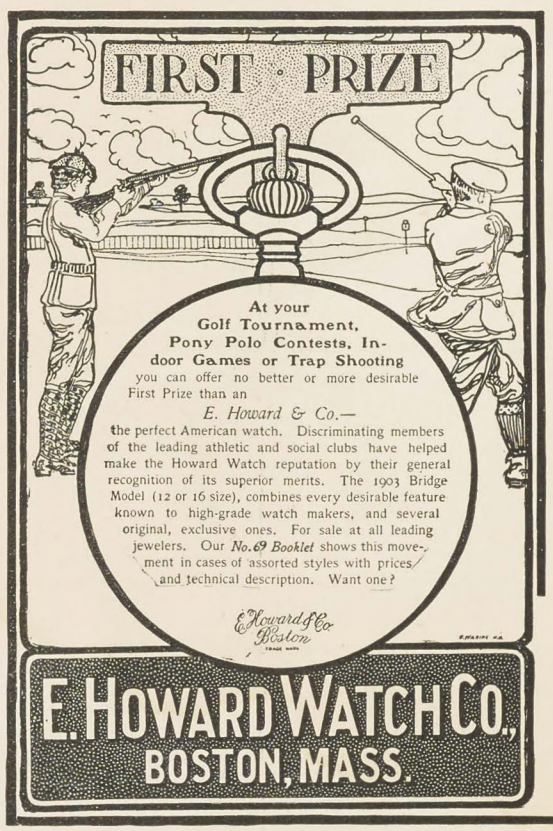
> Briefly stated this company's plan with its patrons is as follows: When you sign an application for a diamond lease, you pay the agent of the company $1.00, $2.00, $3.00, $4.00 or $5.00 down, whereupon an explicit lease is delivered to you by the company through its agent. This lease calls for an installment of one dollar ($1.00) per week until called for redemption, or until the sum of one hundren and ten ($110) dollars has been paid in; and the holder agrees to surrender his lease any time upon delivery of a commercial white and flawless diamond of the weight and value set out in the maturity table attached to the lease and made a part thereof, for the week in which the redemption occurs; and the company further agrees to find a cash purchaser for each diamond for the cash value of the lease as shown in the weekly maturity table. If you keep up these payments for the full one hundred and ten (110) consecutive weeks, one hundred and ten dollars ($110) and your lease has not been redeemed, it then becomes fully paid up and non-forfeitable and non-assessable; and when the lease is the oldest outstanding unpaid in the order of performance, the company will deliver you commercial white, clear and flawless diamonds at the rate and value of one hundred dollars ($100) per carat for which a reliable jeweler will pay in cash at the rate of eighty dollars ($80) per carat.

As concerns of this character are in the nature of parasites on the legitimate jewelry trade the outcome of the action by the Post Office Department will be watched with interest by the jewelers.

A Jeweler's Thrilling Joke

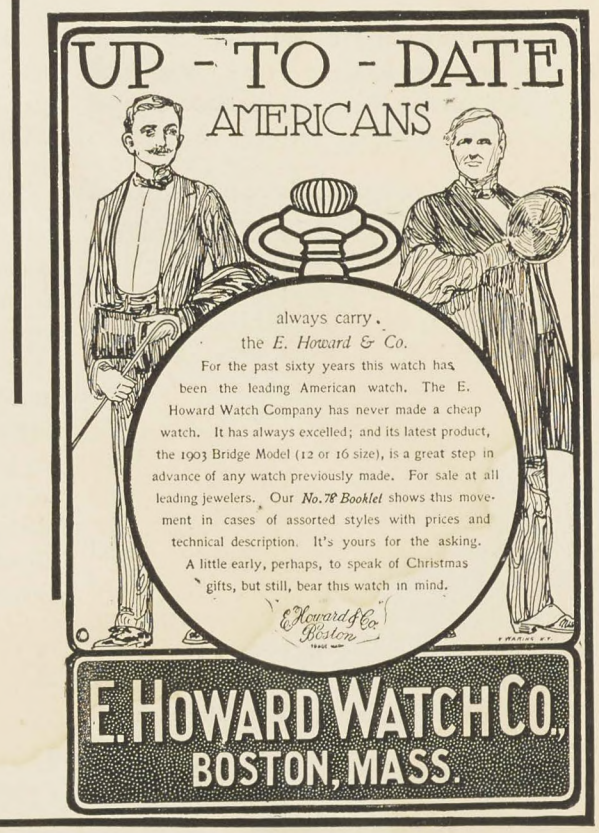
THE jewelry trade, as our voluminous correspondence shows, is rich in wit, but the humor of a certain jeweler of Louisville, Ky., has a rare admixture of the sensational. On a recent afternoon this jeweler assembled his employees, and with an unusually sober countenance said: "I have called you together to inform you that one of the most precious jewels of this store has been stolen, and by a clerk, too. It could not have been accomplished either without the confederation of another. One of them has confessed."

As might well be surmised this caused something like consternation in the ranks. The clerks looked at each other blankly, so overcome were they with astonishment. It was noticed that one of their number was absent. Naturally suspicion fastened on him as the guilty one, and so he was. The situation was fully relieved when the speaker concluded his statement with the announcement that the stolen jewel was Miss ——, and that she was to be married to one of the firm's valued employees.



E. Howard & Co. Watches

Shown here are a couple of the series of advertisements appearing in those publications which reach such persons as would want so fine a watch as the Howard.

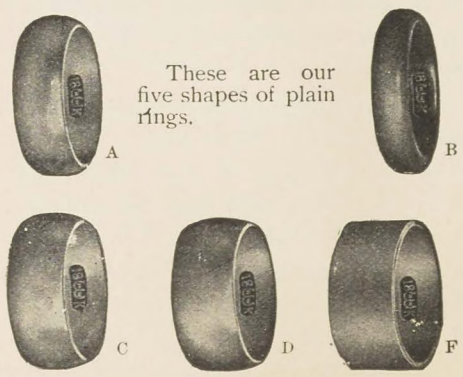


Hayden W. Wheeler & Co.

2 Maiden Lane, New York — *Telephone, 8 Cortlandt*

Quality:

The registered trade-marks stamped in them are guarantees that our rings will assay uniformly plump in quality.



These are our five shapes of plain rings.

Shape:

Our rings are made from solid disks, by most improved machinery and are absolutely uniform. They are made in all the regular shapes, weights and sizes.

Finish:

The finishing of our rings is very carefully done and they are highly polished. There are no better plain rings made.

22 WW K 18 WW K

These registered trade-marks are stamped in all our rings, guaranteeing them.

14 WW K WW

Seamless Plain Gold Rings

An Example for the Tempted

RECENTLY, in Detroit, a traveling salesman of the Non-Retailing Company, of Lancaster, Pa., employed a porter to carry his sample cases on his round of visits to the retail jewelers. At the store of Roehm & Son the salesman picked up one of the cases and went inside, leaving the other cases in the custody of the porter outside.

A stranger then came upon the scene. He asked the porter to deliver a note for him to a near-by address, offering him fifty cents for the service; meanwhile the stranger "would watch the sample cases." The fool porter delivered the note; and when he returned the stranger—*and* one of the sample cases—was missing.

But the Non-Retailing Company, as all prudent and provident concerns in the trade, are members of the Jewelers' Protective Union; and immediately on the discovery of the theft the salesman telegraphed the facts to his house, who as quickly wired the union. The machinery of the union was at once put into operation; Pinkerton's Detective Agency was on the heels of the thief before he could dispose of more than a few pieces of his plunder; and with the exception of these few pieces the entire contents of the sample case were recovered and the thief put behind the bars.

Two instructive lessons are taught by the facts in the case.

First, it should be regarded as a duty on the part of every wholesale jeweler to secure to himself the protection which the Jewelers' Protective Union gives to its members. The cost is little and the advantages are many and obvious. The action of the union is always immediate and positive; the Pinkerton Agency, with all its energy, skill and efficiency, hunts the thief to the uttermost ends of the earth, if necessary—and *gets* him; and the fact that the jobber *is* a member of the union strengthens his credit, since it argues for the security of his creditors.

Second, the unerring and swift action of the detectives employed by the union, and the unrelenting policy of the union in respect of trial and punishment of the thief, is warning to all who may be tempted to steal from the jobber that detection is sure to follow and punishment is certain. This warning should be heeded by those behind the counter, as well as by the outside thief; for there is no discrimination in wrong-doers—if any difference, punishment is more severely administered to those who steal from the inside, as such add a breach of trust to the crime of theft. All who have felt under temptation may know in advance that to steal from a jobber is now probably the most hazardous form of theft; that the agencies of discovery will be quickly on the heels of the thief and will never cease their search until the thief is found; and that no plea will avail against the certain punishment of the law, once the facts are placed in the hands of the Jewelers' Protective Union.

The Profitable After-Thought

YOU will grow in business efficiency according to your application of the teachings of your experiences and observations. And a very helpful habit in hastening your efficiency is the practice of "after-thinking." You should encourage, and not restrain, a looking-backward habit, for the sake of growth.

In this way: After you have made a sale, when an unoccupied interval is found, ponder whether some other line of talk might not have been more convincing—probably sold a better grade of goods than the pieces selected. Same as to your explanation of a mistake or a correction of your customer's misunderstanding, or the putting right of a wrong impression: review what you said and see whether you could have said it better, if you were to have the same opportunity. And so in the score of situations that arise in the course of business, requiring either candid speech, or diplomatic speech, or informing speech. You cannot help but be immensely benefited, for your future prosperous going, in such reviews and after-thoughts.

If only we *could* "think twice before we speak once," what measureless folly we might escape! But the disposition of the average human creature is to serve out the half-baked thought and then stand by it, whatever betides. The merchant's limitations, then, are bound by whether or not he chooses to "stand by" his hasty pronouncements before the bar of his own private judgment. If he obstinately persists in making a fetish of his once-spoken words there is small hope for his broadening and growth; if he is willing to be self-convicted and studies the way to do better next time, he is bound to get bigger with each such experience.

In a face-to-face encounter the speaker has small opportunity, generally, for that accurate weighing of words which will insure the proper deliverance; he speaks, and the sense of error comes to him later. But in answering a letter there is not the same pressure of verbal emergency; he can take the second thought before the first thought goes to his correspondent. Therefore, if the writer is not well trained in the exercise of clear thinking and clean-cut expression—or even if he is—he will always do well if he lets his first draft of any letter that requires a deft touch and careful handling lay over for a day; then on reading his first effort he can almost invariably find words and sentences in it which can be improved upon, even if he is not convinced that the whole course of previous reasoning was all wrong and a new letter, written from an entirely different point of view, was needful.

Some wise man once said that "we grow from our mistakes"; but we must take time to measure and weigh our mistakes, if we would get profit out of them. The after-thought is the yard-stick and scales which "size up" our present shortcomings.

Twelve Things to Remember

1. *The value of time.* Lost capital may be restored, by diligent use of experience; time lost is lost forever.

2. *The success of perseverance.* "Keeping everlastingly at it" brings the hoped-for result.

3. *The pleasure of working.* The only really unhappy, rich or poor, are the idle.

4. *The dignity of simplicity.* When the "frills" are off the man is "on."

5. *The worth of character.* In the last analysis the only real value is a clear conscience.

6. *The power of kindness.* It wins when all coercive measures fail.

7. *The influence of example.* Practice does more than precept, in showing the way.

8. *The obligation of duty.* Your concern should not so much be what you get, as what you do for what you get.

9. *The wisdom of economy.* The man who saves makes more than he saves.

10. *The virtue of patience.* "All things come to him who waits."

11. *The improvement of talent.* Talent is the only capital which compounds itself by exercise.

12. *The joy of originating.* The happiest man is he who does the best thing first. The creative instinct should be encouraged for the pure joy found in its demonstrations. The subsequent financial reward brings no such pleasure as that first sense of having made a new thing or conceived a new idea.

Cultivate the habit of finishing the work in hand before beginning a new piece of work. Clean up as you go. You will thus avoid distraction of mind and be able to work more rapidly and more effectively. The "loose ends" always mark the thriftless and incompetent. The man who has a dozen things under way at one time can do none of them as thoroughly, and with as little mental friction, as the man who does one thing at a time. *Concentrate* your thought and effort on *the one thing now.*

CONCERNING GORHAM GOODS

In buying stock you want the best, of course. Goods that are made by a house with a long-established reputation, and that have stood the test of time are certainly more salable than others less known.

GORHAM GOODS are sold to the legitimate JEWELRY TRADE only. No fear of competition with Dry Goods or Department Stores. They cannot buy them.

GORHAM GOODS are made to meet all demands of the trade, from the most inexpensive articles to the finest examples of hand-wrought wares.

GORHAM GOODS are known everywhere to represent the most approved and fashionable designs, as well as unequaled workmanship.

GORHAM GOODS cost no more than inferior wares without a reputation.

These facts must appeal to the wide-awake, up-to-date jeweler; besides, we carry the largest stock of goods manufactured in our line, and are able to give your orders immediate attention.

The GORHAM TRADE-MARK stamped upon an article is the recognized symbol of standard quality and value the world over.

GRAND PRIX, PARIS, 1900

FIVE GOLD MEDALS, BUFFALO, 1901

HIGHEST AWARD, TURIN, ITALY, 1902

TRADE-MARK

STERLING

GORHAM M'F'G CO.

Silversmiths

BROADWAY AND NINETEENTH STREET, NEW YORK

BRANCHES

CHICAGO	NEW YORK	SAN FRANCISCO
131-137 Wabash Avenue	21-23 Maiden Lane	118-120 Sutter Street

WORKS: Providence and New York

The Retailer's Mailing List

MODERN competitive corditions are responsible for many innovations in business methods unthought of a quarter of a century ago, but now rightly regarded as essential. One of these is a retailer's mailing list. To-day the retailer who would be a leader in his line must keep in constant touch with his customers, not only through newspaper advertising, but by direct and frequent communication by mail with each individual customer or prospective customer. The newspaper is still, of course, the chief medium of publicity, but as all merchants advertise now-a-days, competition is correspondingly greater, and it will profit every jeweler to reinforce his newspaper advertisement by occasional direct appeals to patrons in the form of personal notification of openings, invitations to inspect stock, announcements of holiday purchases, etc.

Compiling a Mailing List

For this purpose a mailing list is necessary, and the task of compiling such a list is by no means an easy one. If the entire store force, however, makes it a point to get as many names and addresses as possible, a fairly good list will soon be evolved. Various more or less ingenious ways of compiling a list have been adopted, and a few of these may give a suggestion to some of our readers. Sometimes a chance is offered on a watch or diamond, and the names and addresses of all visitors are taken. We remember a shoe dealer who utilized the county fair to advertise in various ways, and at the same time secure the much-desired mailing list. As the county fair season is now here the shoe dealer's plan may be instructive. He had 10,000 cards printed with the following blank form :

Name . . . . . Age . . .
P. O. Address . . . . . .
Shoe Size . . . Width . . . Kind . . .
Weight . . . . . .
Remarks . . . . . No . . .

These were numbered consecutively on the blank at the end of the card. Then a booth was prepared in the fair grounds and a pretty girl employed to distribute the cards. The booth carried banners announcing that by filling out the ticket each visitor to the fair would have the chance of getting a pair of $5 shoes free, and a pair of $3.50 and $3 shoes would also be given away. The retailer's space in the papers announced that the three lucky numbers, to be drawn for after the fair was over, would have these shoes, and the holders could come to the store and pick out whatever they wanted at the prices.

The girl, in giving out the cards, got each visitor to fill one out then and there, talked about the store and invited visitors to call and inspect the stock. People got the impression that the dealer was giving shoes away free, and during the fair he did a fine business, much better than had been experienced in previous years during the fair.

After the fair closed a drawing was held, a little girl drawing the three numbers from a big box, in which they had all been dumped and mixed up. There was a great gathering at the store when the drawing took place, the lucky numbers were advertised, the local papers giving considerable space to the news matter regarding the drawing, which gave the store a great deal of free advertising.

A Good Advertisement

A metropolitan firm makes use of a scheme which ensures a correct mail list and at the same time serves the purpose of a good advertisement. This firm sends out with each parcel leaving the store a card similar to the return postal card as follows :

DEAR SIR :—We will consider it a favor if you will fill out the accompanying card and return it to us. It is our wish to please every customer, and any mistakes made in purchases will be cheerfully righted.

New York, August —, 1904.

Was your purchase delivered promptly ? . . . . . .
State time received . . . . . .
Were goods received in good condition? . . . . . .

We desire to render our patrons prompt and satisfactory service, and will appreciate your co-operation to this end.

Remarks . . . . . .
Name . . . . . Address . . . . . .
City . . . . . State . . . . . .

The reverse side of the card bears the name and address of the firm. We are informed that a big majority of these cards are returned. They always impress the customer favorably, and inasmuch as they are a record of complaint as well as of satisfaction, they help in the rectification of error and are a check on carelessness. The names and addresses are filed away, and are used by the firm when sending out circulars or advertising matter of any kind.

A mailing list will be found especially serviceable by jewelers in small towns who are much dependent on patronage from the surrounding country. They can thus keep in close touch with the farmers who are faithful friends of the merchant who treats them considerately.

An Object Lesson to Advertisers

THERE is an excellent object lesson for advertisers in the time and care taken by the presidential candidates in the preparation of their letters of acceptance. Here are men of high education and culture who know what they have to say and how to say it, and yet so anxious are they to make themselves clear to the public, to obviate being misunderstood and to add force to the argument that they spend weeks condensing, elucidating and vitalizing their epistolary messages to the people. The letters of acceptance are really nothing more nor less than individual and party advertisements, plausible presentations of political wares for the consideration and favor of the reading and reasoning public. This, at least, is a case where the advertiser places a just value on the advertisement, and hence the care, consideration and revision given to these letters of acceptance.

There is a moral in this for the advertising jeweler. His announcements in the daily press go to the same reading and reasoning public, and as much care, comparatively speaking, should be taken in their preparation. They should be clear in statement, true in fact and forceful in argument, and be it remembered that the only important criticism offered in regard to the letters of acceptance as advertisements was their excessive length. Don't try to say too much in a single advertisement. There's this excuse for the presidential candidates that only one opportunity was available—one letter of acceptance—but the merchant advertiser can devote his newspaper space each day to a different topic. Keep this in mind during the coming advertising season.

Sound Advice in a Millionaire's Will

THE will of Geo. H. Laflin, the Chicago pioneer, who was for years before his death a director in the Elgin National Watch Company, which has been filed for probate, provides for the distribution of property valued at $2,000,000, and contains the following advice to his heirs:

"I would advise all my children to be prudent in their investments, and not to purchase anything simply because it is cheap, but to remember that a long-time security, drawing a low rate of interest, is often more desirable than an investment which draws a high rate of interest.

"I would also advise them not to purchase anything which they cannot pay for in full at the time of the purchase, as more men are ruined by speculation than in any other way. I also advise them not to sign any note or bond, and to look well to all transfers of real estate, and not to encumber any real estate except for the purpose of improving the same."

It is seldom that a last will and testament is made the vehicle for a little business sermon to the family, but the advice given in this case is excellent and, no doubt, explains to some extent the large fortune amassed by the deceased millionaire.

A Simple System of Bookkeeping

The books to be used are as follows: Ledger and two common manilla, two column, sales books (journal ruling).

On the first page in the ledger enter a statement of assets and liabilities containing at least the following data:

Assets.	Liabilities.
Cash	Accounts Payable
Stock (mdse.)	(other indebtedness.)
Accounts Receivable	
Other assets	

The difference between the assets and liabilities will be the dealer's net worth.

Head the last eight pages in the ledger as follows:

1. Goods sold for cash.
2. Goods sold on credit.
3. Goods bought on credit.
4. Goods bought for cash.
5. Cash received on account.
6. Cash paid on account.
7. Expense.
8. Goods returned from customers.

Take one of the sales books, head columns as in form (A).

January, 1903.

Day	L. F.	Sales	Total Sale of each		Total of each Return.	

Form A.

As credit sales are made, enter customer's name and items bought, but carry only the total of the purchase into the first column. Any goods returned by the customer should be entered as above except that the total would be entered in the second column. As the page fills up foot each column separately and carry to corresponding column on next page until the end of the month, when the total of the first column is entered on the page in the ledger marked "goods sold on credit," and the footing of the second column is entered on the page headed "goods returned by customers."

If duplicate sales tickets are used, simply enter the customer's name, date and amount of sale, or return, in its proper column and file the sales ticket in shape for convenient reference. Now at such time in the day as is most convenient the sales are entered in the ledger as charges to the customer's account and the returns as credits, and checked in the sales book to show that they have been so entered.

Now turn to the last page of the sales book and head columns as in form (B).

January, 1903.

Day	L. F.	Sales	Amount of Invoice		

Form B.

As goods are received from the wholesaler the invoice is of course checked for quantities, prices and extensions. Any returns or deductions are noted on invoice and deducted from its footing. Now on this last page enter the name of the house the goods were bought from, the date of the invoice, and the amount after making all deductions. Treat all invoices in this manner until the page is full, then carry footing over to the preceding page and so on to end of month when footing is carried to ledger page marked "goods purchased on credit." After so entering the invoices file alphabetically.

No ledger account is necessary with the people of whom the retailer buys goods as they have to keep his account in shape for convenient reference and will send him statements periodically, at which time he should check with invoices on his file and notify them at once of any difference. If retailer discounts his bills, the discount should be taken from invoice when it is checked up and net amount of invoice entered.

Freight is considered as expense and so entered through cash book.

For the cash transaction the retailer will use his other manilla sales book.

Skip the first page and commence work on the second. On the right-hand page rule an extra column beside the two already there, as in form (C). On the left-hand page mark first column Cash on Account, and second Cash Sales. As customers pay on account, their names are entered and the amount placed in the first column from which it is placed to the credit of customer's account in the ledger. As cash sales are made, the amounts are placed in the second column.

On the right-hand page head the extra column Cash paid on Account, the next Goods Bought for Cash, and the last Expense. As money is paid out on account, or in settlement in full, enter amount in first column opposite the name of person to whom paid. All cash purchases are entered in second column, and all cash paid for running expenses, freight, rent, clerk hire, etc., placed in the third column.

As soon as either page is full, foot each column separately and carry to proper column on next corresponding page, always remembering that cash receipts are on the left-hand page and cash disbursements are on the right. At the end of the month, carry the footing of each column to its proper page in the ledger. The difference at any time between the footing of the left and right side of the cash book is the amount of cash there should be on hand. The bank account is considered as so much cash. As checks are drawn, the dealer considers them exactly as he does the money he pays out, and makes his entries accordingly. When making his deposits, he should consider that he is taking money out of one pocket (the cash drawer) and placing it in another (the bank); hence no book entry is necessary; his check stubs show at any time his balance in bank.

Now, if the dealer's cash balances, the cash book entries are correct, if it does not, the difference must be located and adjusted. If the dealer so wishes, he can prove his customers' accounts in the following manner:

Add to "Accounts Receivable," as shown in statement of assets and liabilities, the footing of ledger pages marked "Credit Sales," and deduct the footing of ledger pages marked "Goods returned from customer" and "Cash received on account;" if his work is correctly done, the footings of each amount due from his customers, as shown by their ledger accounts, will equal this amount exactly.

The comparison shown by the eight pages in the ledger will be of a highly interesting and instructive nature to the dealer, and will aid greatly in determining his future operations and help in a great measure to stop leakages, by keeping him thoroughly conversant with the principle features of his business.

—*C. T. Inman, in The Bookkeeper.*

January 1903.

Day	L F	Cash Received	On Account	Cash Sales	Day	L F	Cash Paid	On Account	Cash Purchases	Expenses

Gold in a Philippine Death Valley.

The famous Valley of Death in the Island of Mindanao, in the Philippines has at last been compelled to give up the rich treasure which for ages it has successfully guarded by its pall of death-dealing gases.

This valley, which, true to its name, has dealt death to many a venturesome searcher for the precious metal, is located in the mountain fastnesses of the island, and according to the theories of scientists, it is the crater of what was once a great and violent volcano. Volcanic gases of a most poisonous nature still rise from the depths of the valley and hang over it like a pall, never passing away, and many natives, who have attempted to go down into the valley from the mountains, say that never before has any man who ventured into its unknown depths returned to tell of its secrets. The distance across the valley is only a few miles, but the bottom of it is constantly concealed from view by the dense cloud of poisonous vapor overhanging it.

An American named Rudy formed a party at Manila, consisting of himself and two other Americans, and employing three native guides, proceeded to the mountains enclosing the valley, where one of the Americans with the guides were left in charge of the outfit, while the other two entered the valley with their heads completely covered by an apparatus similar to that worn by divers. Carrying on their backs small tanks of compressed air for breathing purposes so as to avoid inhaling the deadly vapors, the men worked in the valley for months, carrying sackful after sackful of gold-bearing sand and gravel up the mountain side. This work was continued until both were almost worn out from the depressing work and the fumes of which they were forced to breathe a portion, but never once could any of the natives be persuaded to venture beyond the outer circle of the poisonous gases.

1904-5 Catalogue of

Bergen Popular-Priced Cut Glass

has been mailed. Advise us if you did not receive a copy

The best showing of new and salable things ever offered in our twenty-five years of business

GOOD PROFITS FOR THE DEALER IN EVERY ARTICLE

Going to the Fair?

A week's accommodation free for our customers

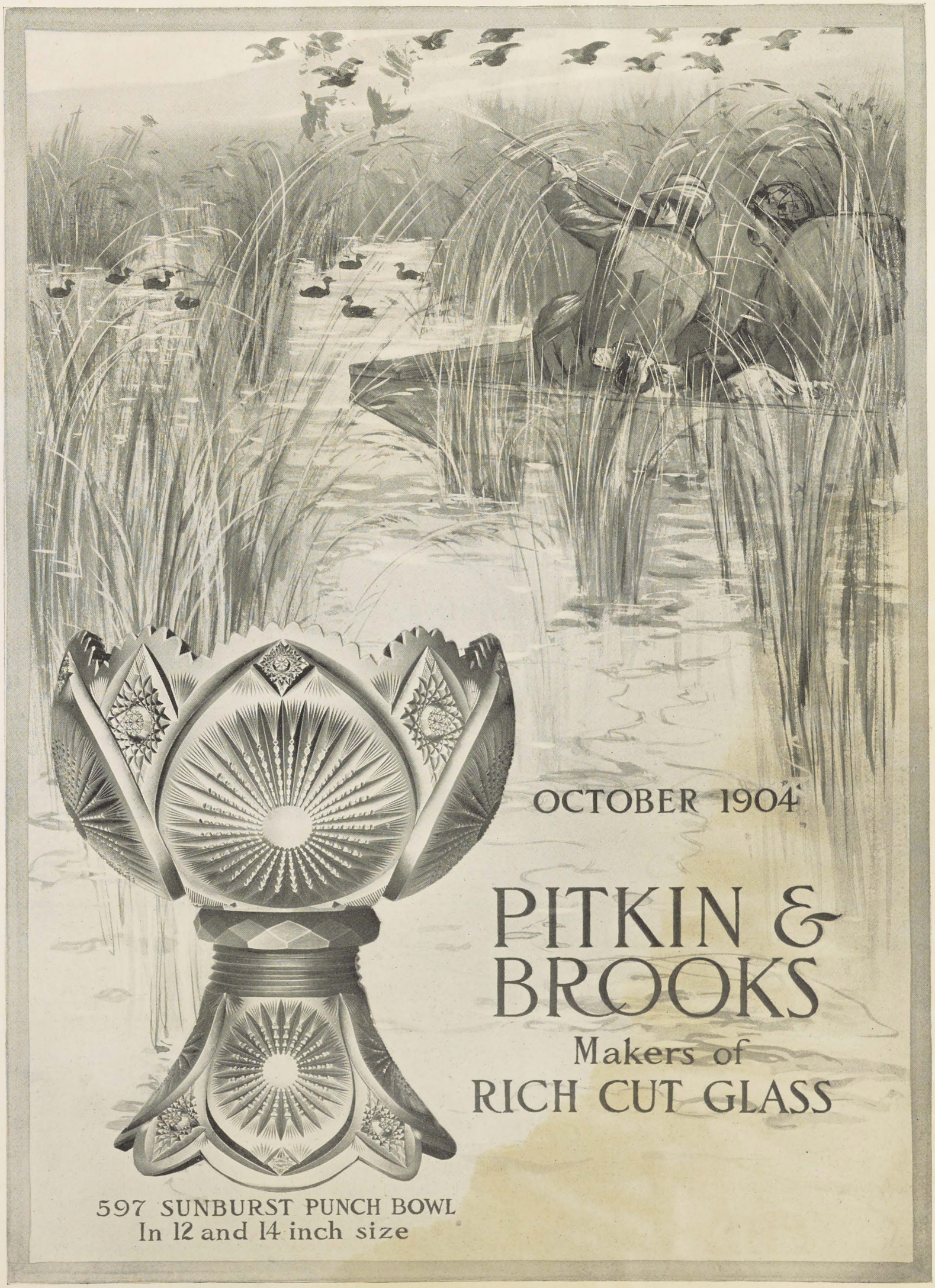
The J. D. Bergen Co.

38 Murray Street

New York

Chicago--Silversmiths' Bldg.
Baltimore--111 Clay St.
Boston--146 Franklin St.

ELECTROTYPES FREE FOR LOCAL ADVERTISING



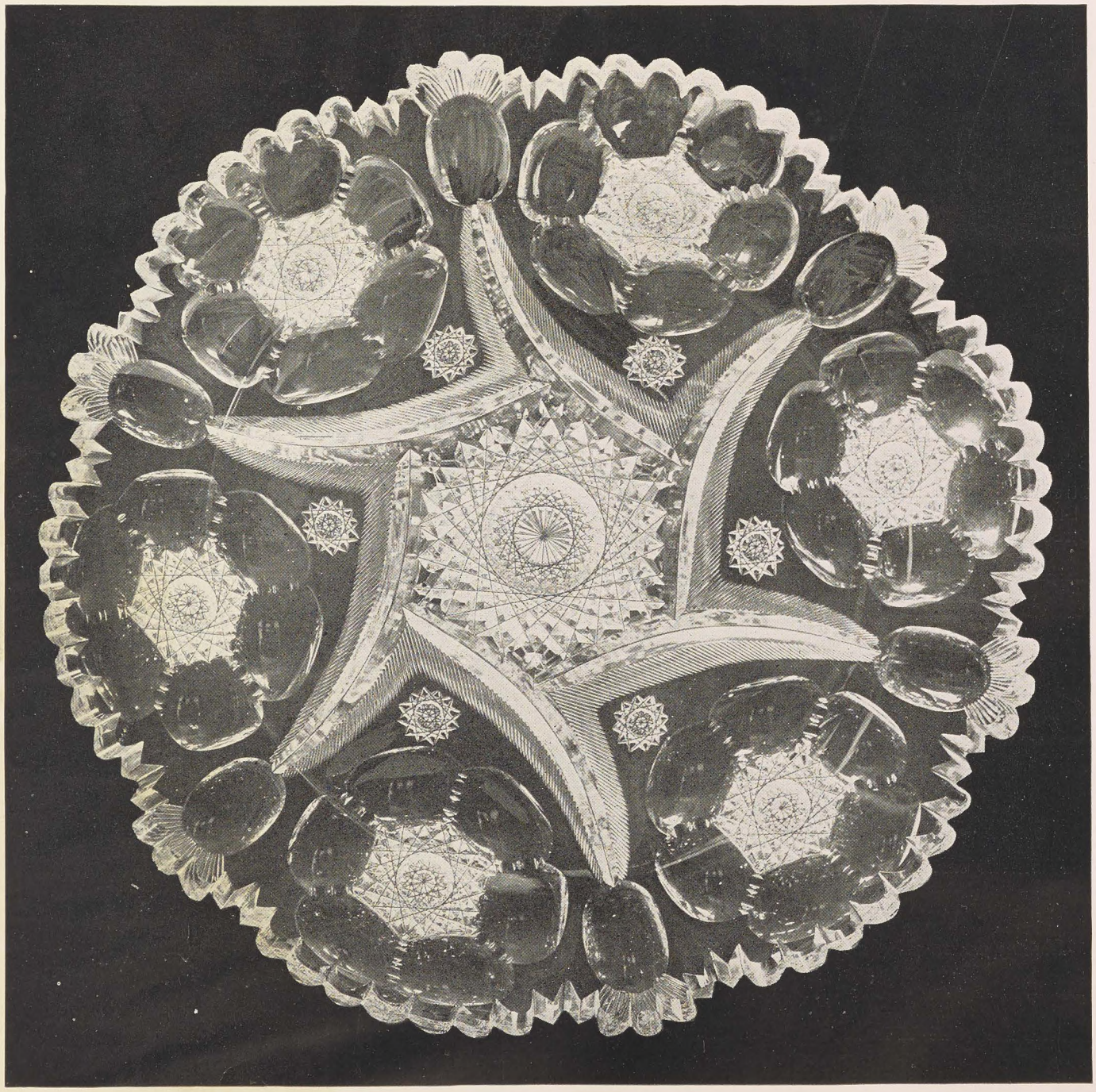
OCTOBER 1904

PITKIN & BROOKS

Makers of
RICH CUT GLASS

597 SUNBURST PUNCH BOWL
In 12 and 14 inch size

Egginton's Celebrated Cut Glass



APPLE BLOSSOM DESIGN

The most exclusive and beautiful line on the market—acknowledged universally the best. Designs original, finish unsurpassed. Carried by best dealers

Look for this trade-mark EGGINTON engraved on each piece

Manufactured by

THE O. F. EGGINTON CO.

Inc. Oct. 11, '99

CORNING, N. Y.

P. S.—Send for Illustrations and Prices
$100. Assortment

THE PAIRPOINT CORPORATION

New Bedford, Mass.

SUPERIOR SILVER PLATE

Beautiful in Design

Reliable in Quality

No. 2735. Ale Set

Design Patented

RICH CUT GLASS

Rich in Brilliancy

Original in Shape

BRANCHES

38 Murray Street, New York City
576 Temple Building, Montreal, P. Q.
120 Sutter Street, San Francisco, Cal.

PHOTOGRAPH BOOKS of our complete lines loaned to the trade for inspection

---

SOMETHING NEW

Combination Sets of new designs in Rich American Cut Glass, put up in white satin-lined leatherette cases

Nothing prettier for show window or case display

SELL THEMSELVES

Pay the dealers a handsome margin

Write for illustration sheets showing different combination sets and prices

For sale only by the originators

OHIO CUT GLASS CO.

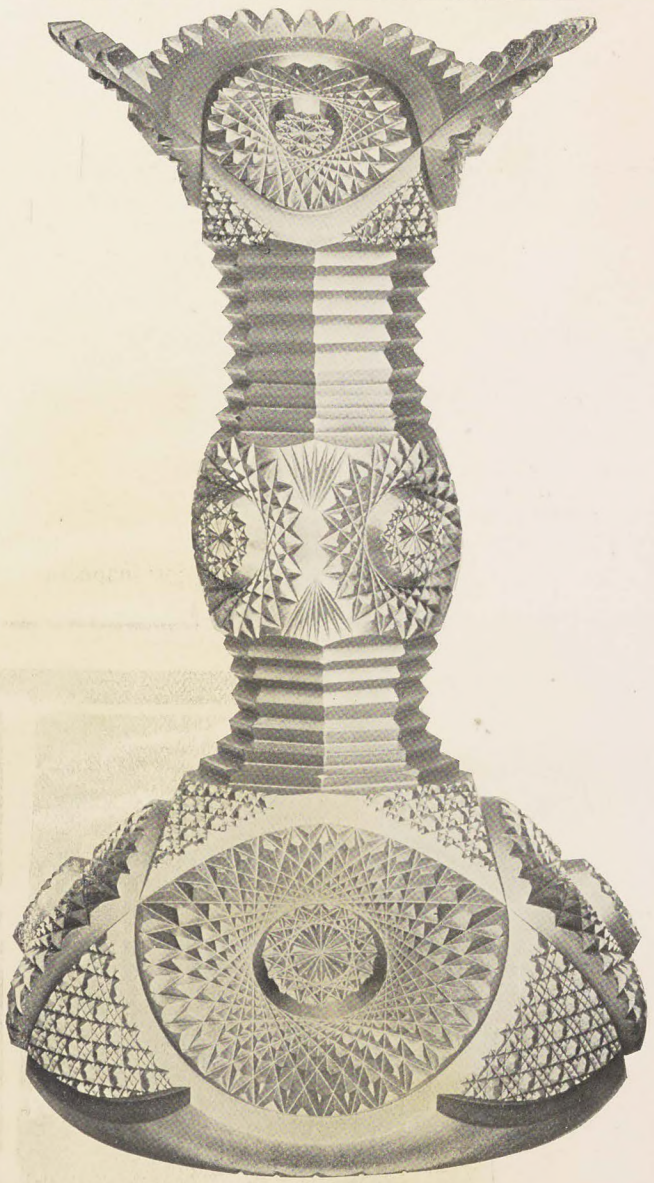
St. Louis Salesroom
505-506 Holland Bldg.

Chicago Salesroom
131 Wabash Ave.

New York Salesroom
26 Barclay St.

Factory, Bowling Green, Ohio

STERLING SILVER
RICH AMERICAN CUT GLASS
AND SILVER PLATE



No. 853—Flower Vase, Cutting No. 1, 12-inch

IN these departments our Warerooms contain an almost endless variety of patterns and values. The out-of-town buyer will do well to call on his arrival in the city and inspect what we have in the lines covered. Make your headquarters with us, whether you purchase largely or not—that is your privilege and our wish—and we offer you the freedom of our New York establishment.

FACTORIES

THE MERIDEN CUT GLASS CO.
THE BARBOUR SILVER CO.
THE HOLMES & EDWARDS SILVER CO.
MERIDEN BRITANNIA CO.
1847 ROGERS BROS.
ROGERS & BROTHER
ROGERS, SMITH & CO.
WILCOX SILVER PLATE CO.
THE DERBY SILVER CO.
THE MERIDEN SILVER PLATE CO.
THE WM. ROGERS MFG. CO.
THE ROGERS & HAMILTON CO.
SIMPSON, HALL, MILLER & CO.
THE WATROUS MFG. CO.

INTERNATIONAL SILVER COMPANY
Warerooms
9=11=13=15 Maiden Lane, New York

GENERAL OFFICE, MERIDEN, CONN.

THE C. F. MONROE CO.

Address all communications to
Factory, Meriden, Conn.

Manufacturers

New York Salesrooms
28 Barclay Street

Wave Crest

made a great hit, and is still selling.

Kelva

is our latest. It is GREAT, having a distinctive style and artistic merit that is making it a winner for the Wedding and Holiday Trade.

Cut Glass

An immense and beautiful line.

Sterling Silver

New and entirely original goods.

Write us, we have something interesting to say.

When in New York, by all means stop at our store, ground floor, 28 BARCLAY STREET

T. B. Clark & Co., Inc.

"Look through the world,
'Tis ne'er met with elsewhere."

RICH CUT GLASS

The combinations and sets which can be made up from the "Clark" line are so numerous that no outfit need be without the cut glass necessary to round out its completeness

Mayflower Set

T. B. Clark & Co., Inc.
Honesdale, Pa.

REPRESENTED
NEW YORK—J. D. Dithridge, 25 West Broadway
SAN FRANCISCO—J. A. Young, 115 Kearny Street
BOSTON—H. T. Edwards, 146 Franklin Street

FACULTY OF ASSOCIATION OF IDEAS

THERE *are certain names which are definitely and inseparably associated with certain articles of trade. On hearing such names the mind instantly reverts to the commercial products with which those names are linked. The play of this faculty of the human mind thus constitutes a sort of automatic advertisement of inestimable value to the firms or individuals thus distinguished.* ❧ ❧ ❧ *An illustration of this truth is found in the force and significance of the name of DORFLINGER in connection with CUT GLASS. This association in the public mind was not attained in a day—could not be—for it is a natural development founded on many years of public confidence.*

ESTABLISHED 1852.

C. DORFLINGER & SONS

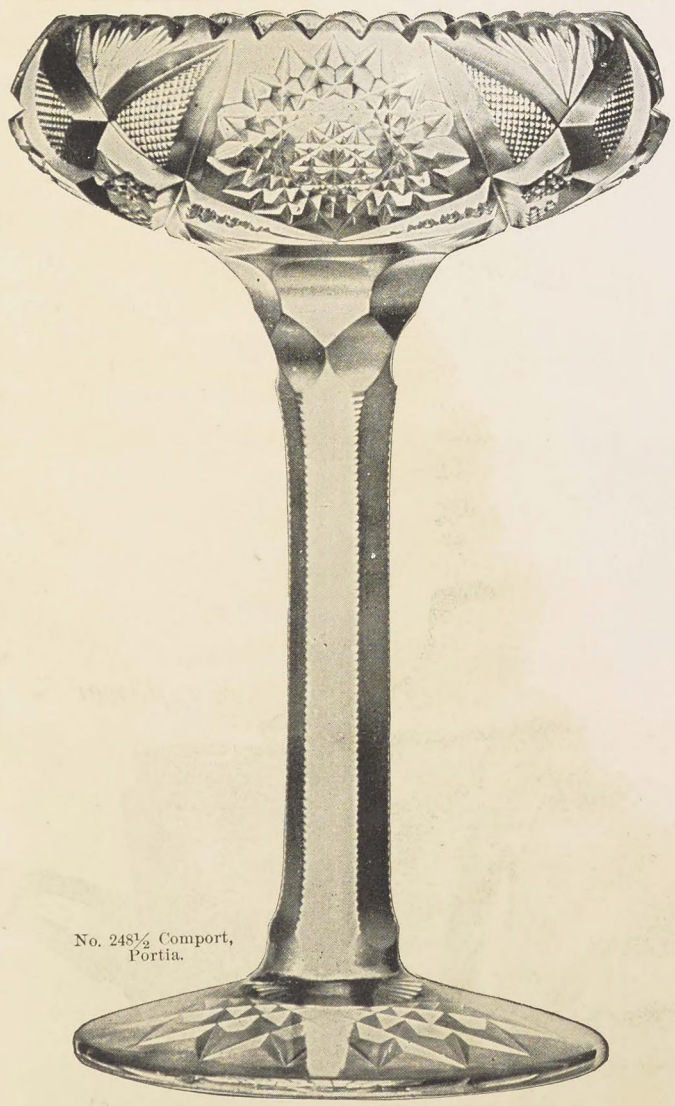
36 Murray Street
New York

Pacific Coast Agent: A. I. Hall & Son
645 Market St., San Francisco

Canadian Agent: Jas. A. Pitts
Temple Building, Montreal

DORFLINGER

TRADE-MARK



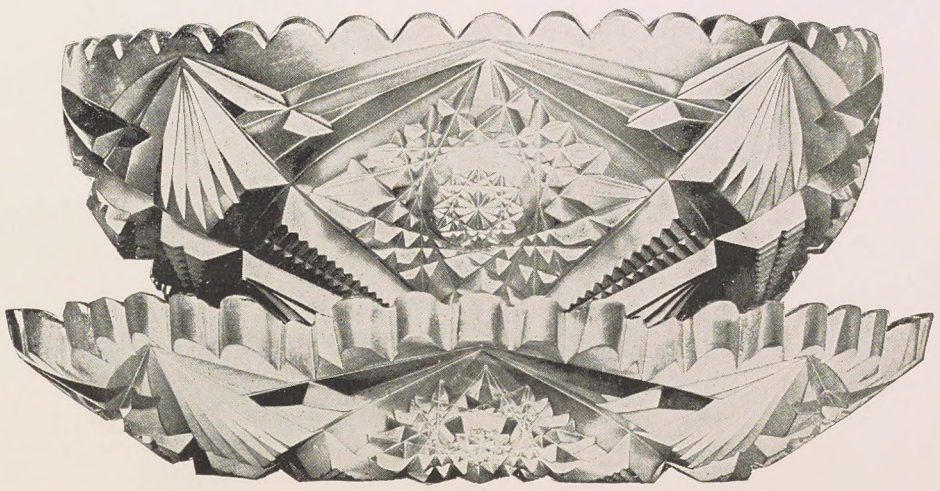
No. 248½ Comport, Portia.

The A. L. Blackmer Co.

New Bedford, Mass.

(Established 1892)

Office at Factory, New Bedford, Mass.



No. 1167 Whip Cream Set, Prudence

RICH CUT GLASS

Our Claims { **New and Original Patterns**
Superior Finish, Moderate Prices
Promptness in Shipping

A large and well conceived line, particularly adapted for your trade
TRY IT

Hawkes Cut Glass

GRAND PRIZE AWARDED, PARIS EXPOSITION

A yellow diamond makes a good show until compared with a white one.

Examine Hawkes cut glass and look for this trade-mark HAWKES engraved on each piece, without which none is genuine. Cut glass and Hawkes cut glass are different, Hawkes cut glass is unique.

T. G. Hawkes & Co., Corning, N. Y.

San Francisco Letter

The magnificent trophy which was won by the St. Bernard Commandery of Chicago, at the Knights Templar Conclave held in our city last month, is the production of one of our leading jewelry establishments, Hammersmith & Field's, of Kearny Street, and it was well worthy of the efforts put forth by the visiting Templars. It consists of a splendid punch bowl, salver, ladle and cups. The set is a triumph of the goldsmith's art in a design true to nature, as shown in our illustration. Every piece of this grand ensemble is of dull red rich copper, with ornamentation of silver. The lining of the great bowl, of the cups, and of the bowl of the ladle is a rich red gold. The big chalice measures seventeen inches from side to side and stands fifteen inches high, while the circular salver is thirty inches in diameter. On the rim of the bowl are two silver Indian heads (which serve as handles), beautifully modeled, with four bear heads and pelts attached, all in solid silver; between the bears are also two silver coats of arms; not of the swords, spears and battle axes of the Crusaders, but of a graceful design of the more rude weapons of the red warriors of the West. The base of the bowl is mounted with real arrow heads of flint, jasper, agate, obsidian onyx, all neatly attached to it. The red copper salver is rimmed and mounted in silver arrow heads and other Indian designs; the most unique, as well as artistic features, of this part of the set are the two handles of buckhorn on the edge of the metal plate. The horn is in its natural state and bound on with silver thongs. The ladle is of sterling silver, its bowl being hammered in gilt, and the handle is a rare piece of stag horn. The whole outfit is one that reflects great credit upon the house that designed and executed the magnificent trophy that so ably symbolizes the great West.

A Remarkable Trophy of Unique Design

John A. Hammersmith (a Knight Templar), of Hammersmith & Fields, is an energetic worker, and the success of entertaining the host of visiting Knights is partly due to his untiring efforts to provide amusement for the city's guests, as he is responsible for the Chinese play which is present during the entire week at the Grand Opera House in conjunction with the sports at the Sutro Baths, and which was a revelation to some of the visitors from our Middle West States.

Percy Greer and his bride have returned from their six-weeks' honeymoon, visiting points of interest in the East. Percy is loud in praising the merits of the fair at St. Louis.

Ed. Evatt, who recently moved from Geary Street to his new location on Third Street, reports business as very good. His only regret is that he did not open his new store originally in his present location. Better late than never, however.

J. W. Field, formerly connected with the jewelry trade in Boston, Mass., has moved his family and household effects to town and will settle here. Radke & Co., the Sutter Street retailers, have been fortunate in getting Mr. Field's services, as he is thoroughly posted on all lines relative to retailing in a first-class store.

James Montgomery, of Montgomery Bros., of South Spring Street, Los Angeles, Cal., has been East in search of novelties for the fall season. This annual pilgrimage is a very profitable one, as it enables Mr. Montgomery to procure the latest effects in bric-a-brac, art novelties and jewelry.

H. L. Frederick, the retail jeweler, of Santa Barbara, Cal., was among the visiting tradesmen in town during conclave week replenishing his stock for the fall season.

Peter Johnson, of Angels Camp, was among the visiting Knights during the conclave, and he was personally responsible for the success of Pacific Commandery No. 3's exhibits in the large ball room of the Lick House, where he had an elaborate display of gold quartz from his section of California.

G. Reber was in town with the host of visitors. Master Reber accompanied his father to view the decorations and night illuminations. Mr. Reber reports the outlook for future business in Angels Camp as very prosperous, some very fine strikes having been made recently in this gold producing section of our State.

J. J. Hoin, the retail jeweler, of Antioch, Cal., was in town buying a complete new stock to carry him over the holidays.

F. C. Ewert, of Woodland, was among the army of visitors during the Knights Templar conclave. Mrs. Ewert and her daughter accompanied him and were greatly impressed with the imposing appearance of our city during the parade, with its thousands in line and an outpouring of at least a quarter of a million sightseers.

Bert Anderson, who is one of the Anderson Bros., of Auburn and Sacramento, combined business with his Masonic pleasures during the gathering of plumed Knights, and renewed old friendships among friends in the trade.

Emil Steinman and family, of Sacramento, was among the thousands who marveled at the electric display along the blazed trail on Market Street during the week of the big show.

Al. Cantor, the advance agent of prosperity with Nordman Bros., has joined the benedicts. The fortunate young lady, Miss Nellie Wright, is a native of San Francisco, and the young couple are receiving the congratulations of their many friends in the trade. The ceremony took place on August 24th, which accounts for Al.'s advance cards not reaching you when they should.

Harry Jacoby, who conducts a retail store in Oroville, Cal., was among the sightseers, and also bought some desirable ready sellers to replenish his stock for his expected fall business.

A. Eisenberg, Jr., of A. Eisenberg & Co., is still recuperating at Harbor Springs, and we feel as though his long absence from business will be beneficial in the end, although his presence is very much missed by the entire working force in his concern during this busy season.

Chas. Niner, of Pleasanton, was among the visiting tradesmen in town during conclave week, on a pleasure trip, and incidentally marveled at the grand electrical display on our principal street.

Mr. Eppstein, buyer for Frank Golden's jewelry store in Carson City, Nev., was among the visiting tradesmen in town last month buying stock for his fall trade.

Mrs. Sherman Thompson, wife of a leading retail jeweler, of Salem, Ore., spent a delightful vacation visiting points of interest in and around San Francisco during the visit of the Sir Knights.

D. T. Badgley, who formerly conducted a jewelry store in Anderson, has opened a new establishment in Livermore, Cal., and found it necessary to visit this jewelry center to purchase stock for same.

S. F. Hollander, of Eureka, Cal., was among the visiting Sir Knights in town during the conclave on pleasure bent.

M. W. Argall, the Grass Valley retail jeweler, was among the army of visitors during the white light display, and called upon his friends in the wholesale districts.

A. A. Ritter, formerly of 237 Kearny Street, has moved into his new quarters at 524 Kearny Street, where he will have more than twice the floor space previously used in his old store. This move was necessary on account of growing business.

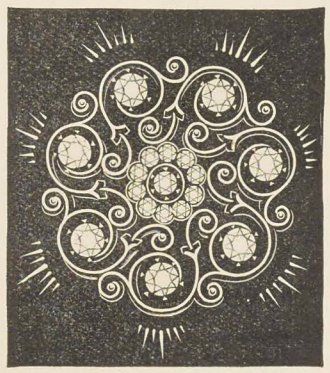
Peter Engle, of Marysville, Cal., was noticed among the ranks of the marching hosts of Knights Templar on parade day.

Hanak & Lasky have moved into their new store at 237 Kearny Street, and have fitted it up in keeping with the rest of the stores in this neighborhood.

Geo. Kryhl, of C. P. Kryhl & Son, retail jewelers, of Santa Ana, was among the visiting tradesmen in town during the conclave on a pleasure trip.

Henry Bohm, of the enterprising firm of retail jewelers, Bohm-Bristol Co., with establishments in Denver, Colo., and San Francisco, was among the visitors to the conclave. Mr. Bohm is an enthusiastic Templar, and has been a member of Colorado Commandery No. 1 of Denver for more than fifteen years and is content to serve in the ranks.

(*Continued on page* 1581)



No. 26C $324.00
No. 27B 360.00
18 fine diamonds
Weight, 1¾ carats
Subject to Catalogue Discount

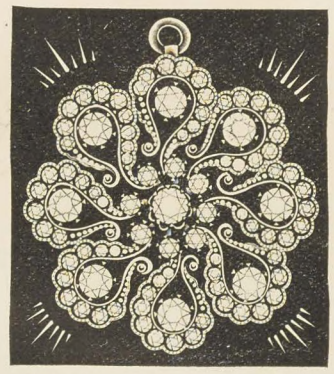
WE GIVE YOU

The Best Value in Diamonds
The Lowest Prices on Diamonds
The Largest Assortment of

No. 90C $82.00
1 fine diamond, 3/16 carat.
90 fine pearls.
14 K. brooch and pendant.
Subject to Catalogue Discount

DIAMONDS (LOOSE OR MOUNTED)

AND SAVE YOU
MONEY ON
EVERY PURCHASE



No. 25B $1350.00
89 fine diamonds.
Weight, 5⅛ carats.
Solid platinum and gold.
Extra fine piece.
Subject to Catalogue Discount

AND SAVE YOU
MONEY ON
EVERY PURCHASE

You can meet and undersell competition with our goods, because we give you the most and best for the money.

Our New 1905 Catalogue is Now Ready

If you are a regular jeweler and have not received it, please inform us and we will cheerfully send you one free of charge.

No. 419 . . . . . $30.00
1 fine diamond.
Engraved rose color finish.
2 pictures.
Subject to Catalogue Discount

Otto Young & Co.

Wholesale Jewelers

CHICAGO, ILL.

149-153 State Street

No. 425 . . . . . $22.00
1 fine diamond.
Green and rose finish.
2 pictures.
Subject to Catalogue Discount

Cincinnati Letter

Business Improving

Traveling men report an increased business from all sections of the Central States. While the increase is not phenomenal, yet, considering the fact that this is Presidential year and that the business is of a better class, it indicates that the winter season will be a prosperous one. From the farming sections, which seemed to be threatened for a time with disaster, because of lack of rains, come the reports that healthy rains have fallen and that the crops will be bountiful. With this condition obtaining in the rural sections, confidence in the national policy undisturbed, and business in general being good, there is no reason why a big winter trade should not materialize.

Harry Bohmer, with Frohman & Co., accompanied by his family, spent several weeks at Benton Harbor, Mich.

John Schmid, an old-time jeweler, who retired from business a number of years ago, after having made a small fortune, has decided to again embark in the business, and is now looking for a suitable location.

Charles Keller, of Frankfort, Ky., was here several days, ordering his winter stock.

C. S. Bennett, bookkeeper for Frank Herschede, spent a two weeks' vacation on the lakes last month.

Salesmen, representing the Miller Bros. Jewelry Company, who have completed trips through a dozen States, report good crops and favorable indications for a heavy winter business.

S. & H. Gilsey, the Pearl Street jobbers, have added a cut glass department to their business.

William Diehl, a jeweler at Anderson, Ind., was a new buyer in the Cincinnati market.

Joseph T. Cantor, of the wholesale jewelry firm of Lehr, Cantor & Co., against which several creditors recently brought bankruptcy proceedings, filed an answer in the United States Court, admitting all of the allegations in the petition filed against the firm, and he asks that the latter be adjudged a bankrupt. This is the case where Ira H. Lehr, the partner of Cantor, left under unexplainable circumstances, and has not been heard from since. Schedules of the assets and liabilities of the firm were filed in the Court. The former consists of stock in trade valued at $500; debts due on open accounts, amounting to $82.04, and $2 in cash. The liabilities aggregate $6,677.26. Cantor's individual indebtedness is given at $120. He has no personal assets.

C. G. Schlenker and wife, of Hickman, Ky., recently passed through the city on their way home from the World's Fair and the place of their nativity, near Eaton, Ohio.

E. J. Morris, with the firm of Loring Andrews & Co., has returned from a pleasant trip through the East.

Miss Dora Ochs, one of the well-known lady employés of A. & J. Plaut, was married to L. S. Lehrman, also of this city, early in the month of September. The wedding trip of the happy couple included the World's Fair and other points of interest in the West.

J. L. Whistler, jeweler, of Marion, Ind., was in the city several days, buying fixtures for a new store which he is fitting up.

Launch Built by Watchmakers

No arrival for a long time has aroused as much interest in river circles as the new launch, the only one of its kind on the Ohio River, which anchored at the foot of Vine Street early in September. Although the craft is intended for service on the Ohio and Mississippi streams, it is built for lake and coastwise and ocean service. The boat is named the "Cincy," having been built by two Cincinnati boys who are novices in the shipbuilding line. The owners are J. M. Benjamin and Frank C. Menke. The boat was constructed in Jersey City, N. J., and taken to New York City harbor and vicinity, where, for three months or more, it plied the waters in that vicinity. The work of building the boat began last October. On August 18th last it was hauled on a railroad to Pittsburg, and two weeks later it was started on a cruise for the Fair at St. Louis, arriving at this point in less than four days. It will be returned to this city to enter in the excursion service. While here the Menke boys tendered a party of friends an excursion on their boat. The craft is 38 feet long and 10 feet wide, and will accommodate about 40 persons. It has a twin-screw propeller, operated by means of gasoline. The maximum speed is 12 miles an hour, and it will keep up an average speed of 10 miles an hour. It is the intention to fit it up with a kitchen and dining-room and bunks that will accommodate a dozen persons, enabling a party of that number to go on a long voyage. The builders of the boat are watchmakers by trade, and left here several years ago to take up their work in the East. Not a mishap has occurred since it was put into commission.

Burglars recently broke a large plate-glass window in the jewelry store of A. Wahl, 1118 West Eighth Street. They were frightened away before they secured any valuables.

Hugo Lindenburg, of Lindenburg & Fox, has completed a business trip through Kentucky and Tennessee.

Theodore Neuhaus, of the local manufacturing firm, has been appointed a judge of awards in the gold and silver jewelry department at the St. Louis Fair.

S. N. Jenkins is refitting his store at New Richmond, Ohio, and was here several days, purchasing new fixtures and fall stock.

C. A. Gebhardt, connected with the firm of Albert Bros., was ill for some time, with malaria fever, but is reported recovered.

Joseph Hellebush, son of Clemens Hellebush, and for a number of years associated with the business of his father on Fourth Street, died at the home of his parents, at 1603 Ruth Street, some weeks ago, of a complication of diseases, following an attack of paralysis of four years' standing. During his brief business career the young man became very well known among the trade.

Leo Loeb, of Herman & Loeb, was in the East several weeks, looking after some big purchases for the firm.

Ed. M. Klein, of Muncie, and C. C. Ackerman, of Connersville, were among the Northern Indiana buyers who visited the local trade during the month of September.

Traveler's Trunk Disappears

Thoma Bros., dealers in jewelers' supplies, at 419 Vine Street, were notified by wire that Fred Thoma, one of the firm, had been robbed at Fremont, Ohio, of his trunk, containing $6000 worth of jewelry samples, on September 8th. Upon his arrival at Fremont Fred Thoma ordered his trunk sent to his hotel. After waiting for an hour for the trunk he hurried to the depot, and learned that a man, other than the expressman that he had ordered to haul his trunk, had called at the depot station for it. Depot attaches recall that a strange man, with a wagon, backed up to the depot platform, and taking the trunk on his wagon hastily drove off. The depot employés said the man seemed excited as he drove away. All trace of him has been lost. The police of this city were notified, and a search from this end of the line has been started. The belief is that Thoma was followed by some thief, who bided his time until just such an opportunity as occurred presented itself.

Louis Goerner, former bartender, who won a $7500 lottery prize a year ago, was sued by Jeweler George Simper for $275, for a diamond stud. Simper told the Squire that Goerner had lost one stud and got a duplicate in order that his relatives might not discover his loss. He claims Goerner agreed to turn over certain stocks as security, but failed to do so.

Bankruptcy Referee H. H. Haines has called a halt on proceedings by which the estate of W. F. Eyles, bankrupt, was being settled, in a way the referee holds contrary to law. Eyles was in the jewelry business in Dayton. Before going into bankruptcy he made an assignment to Wm. H. Young. The assets were appraised as worth $3388, but the referee reports that Eyles and Young arranged to buy them in for $1200. That amount was bid by Mrs. Eyles. The referee says the transaction was completed by the assignee giving Mrs. Eyles a check of the firm of Young & Young, as assignee, and received the goods. The referee declares the amount grossly inadequate and insists there is no valid sale. The return of the property is demanded. Assignee Young says he acted in accordance with the orders of the State Court. The case has been submitted to Judge Thompson in the United States Court.

Mrs. Stanley Match, wife of a Cleveland jeweler, was, until recently, the guest of her mother and relatives in Covington, Ky.

The jewelry store of Isaac Schwartz, at 29 East Sixth Street, was damaged to the extent of several hundred dollars by water and smoke, a short time ago, during a fire at the Bristol Hotel, in which building the store is located. The fire originated among electric wires at an early hour in the morning, and caused something of a panic among the guests. No one was injured, and the damage to the various business enterprises was covered by insurance.

The Herschede Hall Clock Company, which has had an elegant exhibit of half clocks at the World's Fair, has been awarded the first gold medal upon the clocks and the first silver medal upon its symphony tubes. The honor is a merited one.

E. Bixby, of Ironton, Ohio, made a flying trip to the city to secure some needed stock.

Two employés of A. & J. Plaut were made extremely happy a short time ago by the arrival of a young heir. The addition was made to the family of H. I. Jacobson. A. C. Tepfert, father-in-law of Jacobson, and also connected with the firm, was more elated, if possible, at becoming a "grandpa" than Tepfert was at becoming a "papa."

Wm. Pflueger is making a trip up the Ohio River in the interest of Jos. Noterman & Co.

Herman Keck was recently a visitor at Saratoga, New York.

The jewelry firm of Frauken & Levites, who have been doing business at 725 Central Avenue for a number of years, has been dissolved, Levites continuing to carry on the business individually.

Edward H. Simper, jeweler, at 707 Vine Street, is home from a pleasant trip on the lakes.

Mr. and Mrs. Fred Willets, the former connected with E. & J. Swigart, are rejoicing over the arrival of a bouncing boy at their home.

Gus Frank, of Herman & Loeb, and Miss Lilian Rexinger, both of this city, were married September 7th, and left on an Eastern wedding trip, which included Atlantic City and other watering resorts.

Jacob Dorst, senior member of Dorst & Co., is making a trip through Western cities in the interest of the new branch house which was recently established at Kansas City.

Chas. F. Kline, a jeweler of San Antonio, Tex., recently stopped off in the city on his way home from the East. He left several nice orders before departing.

Vicor A. Gebhardt and wife recently returned home from an extended and very pleasant automobile trip through Michigan and Ohio. The Gebhardt Bros. have built up a very lucrative manufacturing business in the past few years.

C. J. F. Bene, the retired jeweler, who formerly was a senior member of the firm of Bene, Lindenberg & Co., has returned from a summer tour through Europe.

Among the jewelers who visited the trade during the past month were: Ohio—S. N. Jenkins, New Richmond; P. W. Starks, Manchester; A. Wahlrab, Dayton; A. Lehne, Mechanicsburg; E. D. Grandmason, Kenton; H. C. Reed, Blanchester; H. H. Eveslage, Ripley; E. Bixby, Ironton; Frank B. Carey, Lebanon; Dr. H. W. Bryant, Troy; G. H. Hansgen, Bethel; Joseph Meyer, Harrison; J. H. Drake, Lebanon. Kentucky—C. G. Schleuker, Hickman; J. Warren, of Warren & Warren, Paducah; J. H. Bovard, Newcastle; J. W. Burk, Carrollton; H. A. Rohs, Cynthiana; J. E. Robertson, Brookville; Charles Keller, Frankfort; Frank Fullilore, Owenton. Indiana—J. L. Whisler, Marion; C. C. Ackerman, Connersville; William Diehl, Anderson; Ed. M. Klein, Muncie; Ralph Timmerman, Batesville; C. F. Kline, San Antonio, Tex.

A FEAST FOR FALL BUYERS

We invite the attention of all Jewelers to our magnificent new fall stocks in

WATCHES
DIAMONDS
JEWELRY
SILVERWARE

Everything the Jeweler needs for fall and holiday trade

We handle only reliable goods—such as will help your business and safeguard your reputation.

Our central location means easy access, prompt service, economy in freight charges, satisfaction in everything

GEO. B. BARRETT CO.,

WHOLESALE JEWELERS AND DIAMOND IMPORTERS

347 FIFTH AVENUE
PITTSBURG, PA.

R. B. MACDONALD & Co.

MANUFACTURING JEWELERS

Bigney Building, ATTLEBORO, MASS.

336/3

Our Specialty

CURVED JOINT

LOCKETS

Pat. Feb. 10, 1903

ALSO

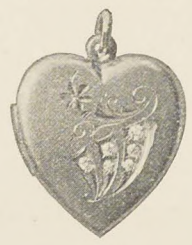
Silver Novelties

IN

Manicure Sets	Match Boxes
Desk Sets	Book Marks
Tooth Brushes	Hat Marks
Paper Cutters	Garters
Hooks, Files	Etc., Etc.

SPECIAL VALUES

ASK YOUR JOBBER FOR THESE GOODS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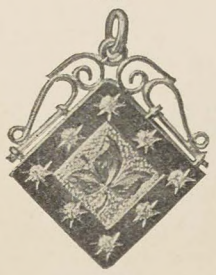
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The Little Beatrice Locket

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Trade-Mark

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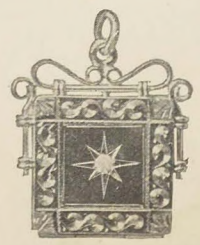
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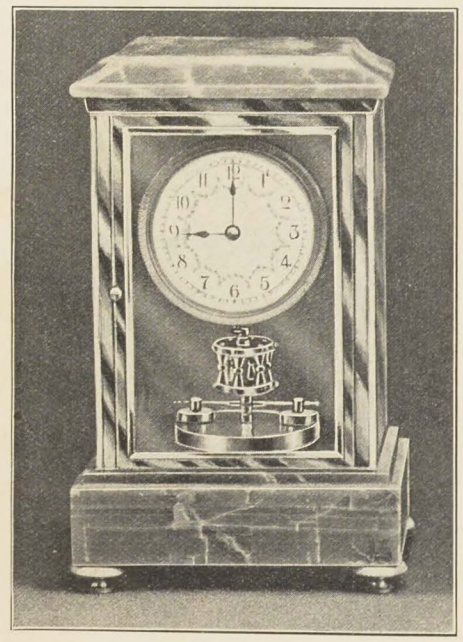
Anniversary Clocks *Trade-Mark Registered*

Mantel Regulator No. 1

Mexican Onyx and Gilded Bronze Case

Our Crystal and other fancy cases for the Anniversary Clocks (eighteen patterns) are all made for us by the best clock case makers in Paris—the Metal work is *heavily gilded* and will not tarnish as does some of the cheaper cases made in other countries. Send for catalogue with revised prices, and order your Anniversary Clocks now for the Holidays while the stock is complete.



Price, $30.00 Net Cash

Height, 12¼ in. Width, 7½ in. Porcelain Dial, 4 in.

The Bowler & Burdick Co.

Sole Agents for the Anniversary Clock

CLEVELAND, OHIO

Pittsburg and Vicinity

Favorable Trade Prospects

Fall trade has started in Pittsburg with more encouraging signs than were apparently hoped for by most of the jewelry trade. This is the consensus of opinion of the leading members of the craft, and is borne out by the fact that after the extreme dullness of the summer, which seemed to reach the climax during the past month of September, a buying movement has started among the great mass of people and promises to continue. September closed with a number of notable weddings, all of which spread their influence over the trade, and in a material way added to receipts. This coming month of October has several equally as notable events in local society, which will help the good cause along, and perhaps it is interesting to note that no less than three Pittsburg belles are preparing for nuptials in which the grooms are foreign noblemen. In such cases the demand for wedding gifts is not confined to a few by any means, particularly in the case of these three, owing to the general popularity of the Pittsburg young people who are involved.

Wholesalers Report Improvement

Among the wholesalers the report is given that most of the salesman on the road are sending in good order sheets, and most of the houses are busy putting in new stocks for the coming season. Geo. B. Barrett Co. report particularly favorably on this matter, and have an unusually fine lot of goods arriving, not a small portion of which is imported ware, the result of the summer buying. The establishment has the appearance of improved conditions, and business is moving rapidly.

Heeren Brothers & Company have attracted wide attention with one of the finest exhibits of imported bronzes and art goods at the Pittsburg Exposition which is now in progress. The company has a handsome booth in the annual industrial show, and this has been the central point for thousands to view the display for some weeks. The same house has its factory in operation under high pressure, and the officials speak encouragingly of the outlook. Viewed from a basis of past experience, it is called to mind that during the summer of 1903 the business conditions were unusually good when they were rather expected to be quiet. In the fall, when trade was expected to spurt ahead with greater energy, there was a marked falling off in demand. This year the summer has been more quiet than for years past, and for this reason the reversal of the winter trade from last year is confidently predicted, and better demand is looked for and, in fact, has already shown itself.

A New Store

Perhaps one of the more important events of the season has been the formal opening of the Pittsburg store of James McCreery & Company, of New York. This store occupies a twelve-story building in Wood Street, and is one of the most extensive department stores in the State. Of course, there is a jewelry department, and this drew the attention of the trade to this particular newcomer. Inspection of the stock in a casual manner was quite general among the trade, and the pronouncement of the stock as one of the highest grade in the city, and at prices that will in no way interfere with the legitimate trade, has satisfied the dealers generally that they will not have another disputant to their own share of business thrust upon them this season. The store is superbly equipped, and the jewelry department on the ground floor has many fine fixtures, with novel devices for display that are new in this section. The stock is the usual run carried in department stores, but of a high order and entirely free from "bargain-counter" material.

Displays of New Goods

Window decorations for the fall are bristling with novelties and new stock. Dealers call attention to the fact that the Toplitz ware is very popular. The stocks of this class of goods are quite large. There is some complaint of the slow arrival of cut glass stock. The local demand for cut glass this season has been phenomenal, and the orders have been so heavy that the manufacturers have been unable thus far to get their factories up to the required shipping point to meet the demands. Such stocks and designs as have come out this fall, however, have been freely displayed, are attractive and appeal strongly to the buyers.

Gillespie Brothers are filling their handsome showrooms in the Park Building with new goods, some of which are from Europe and were secured during the summer.

L. W. Vilsack & Co., in the Farmers' Bank Building, have continued their handsome window displays that hold the attention of thousands in that section of Fifth Avenue, and the house is catching a good share of the trade. Some of the more generous buyers among Pittsburg's wealthier class have only just returned from the summer outings and summer homes in the mountains and seashore, and for this reason have been a little slow in making their appearance in the stores of their favorite dealers, but these are looked for at any time now with the many weddings approaching.

St. Louis Exposition

It is interesting to hear the discussion on the exhibits at St. Louis, which local dealers spent some time in looking over. The foreign manufacturers carried off the honors in local opinion, showing that American producers of art goods have a considerable distance to cover before reaching that degree of perfection that will warrant them in competing seriously with the old-world people. The one great surprise expressed is at the poor showing made by the American cut glass men, whose product is superior to the foreigners. So few had any exhibit at all, and those that did seemed to be so small in extent and design as to give the impression that they were too busy to give the great exposition the attention that it deserved.

During the past month the stocks of a few of the small traders, particularly those confined to the cheap grade of goods, have been sold by auction sale. The character of the goods handled has been such as to make the effect unnoticeable among the trade, but the high rents that have been growing more depressing to the spirits of all classes, have had the effect of closing some of these cheap goods stores permanently. Diamond's optical store, at Sixth Street and Penn Avenue, which had a large floor space at the opening of the season, has been curtailed by the sub-leasing of the rear portion of the store to a haberdashery, which has an independent entrance in Penn Avenue. Other dealers who have been able to curtail and economize to meet the high rentals are doing so readily enough, and will not apparently suffer in trade by this move.

Great Industrial Activity

General business conditions in this district, which shrewd jewelers always scan with close attention to detail, have been summed up as more favorable than a year ago. While it is true that the business depression is still in evidence, it is being dissipated with the resumption of operations at all of the great iron and steel mills and among the furnaces, giving employment to hundreds of thousands of men. The earning power of the people has been lessened from the high percentage of the past two years, but the costs of living have been gradually settling to the new era. The element of conservatism that is prevalent is regarded as one of the most promising features for the winter trade, because the general revival that is elsewhere indicated, is given a permanency that is strengthening confidence and encouraging investments. Bankers report easier money, and while the movement toward a more active life in all commercial circles is slow, it is sure and steady. The Pittsburg stock market has been recovering from a stagnant condition, and prices have risen steadily on all standard securities, particularly industrial stocks, which would be the first to reflect in this section the feeling of the general public.

San Francisco Letter

(*Continued from page* 1577)

C. W. Ernsting, the retail jeweler, of San Diego, spent a very profitable week during the conclave. Mr. Ernsting had charge of a display of the new California mineral "Kunzite" at the San Diego exhibit in the Mechanics' Pavilion, and always had a willing audience at his command, as his exhibit consisted of some magnificent specimens of valuable jewels found in his section of our rich State.

Chas. J. Noack, one of the leading retailers of Sacramento, was one of the marching host during the Knights Templar parade.

M. Saier, of Fresno, paid this city a visit recently and called upon his friends in the trade. He incidently laid in a nice line of ready sellers for his fall business.

A. Isaacs, the retail jeweler, of Kearny Street, this city, is on a sightseeing tour of Eastern points of interest. Mr. Isaacs' family accompany him and they will be away at least three months.

C. C. Weindieck, the Red Bluff retailer, attended the conclave of Templars and called upon his friends in the trade while in town.

The jewelry store of Fred. H. Van Norden, The Dalles, Ore., was robbed of eighteen watches, one tray of lockets and a tray of brooches on the evening of September 8th. A stone was thrown through the window and the goods were then grabbed up. There were three men implicated in the robbery, and up to this writing none of them has been apprehended.

What Becomes of the Pearl Buttons

"America destroys annually 17,500,000 gross of pearl buttons," said J. F. Robinson, of Omaha, Nebr., who is engaged in the manufacture of that article of commerce. "There are in the United States about fifty factories that turn out daily 1000 gross of buttons at least. I should not be surprised if the average is larger than that, but I am sure the figure is on the inside. What becomes of them is another question. Some people save buttons with the same zeal that a miser saves coins, and so the consumption of seventeen and a half millions a year must arise from the careless classes who lose or throw them away when they come off their garments. The industry is rapidly growing, and the demand for the product is such that all the manufacturers are kept busy with their orders.

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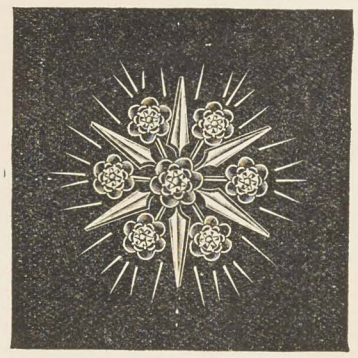

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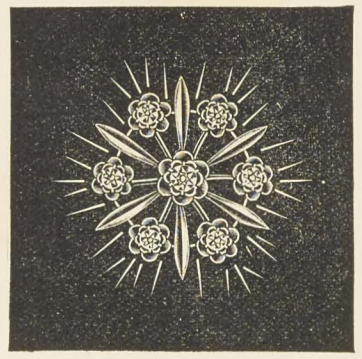

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An ordinary soft-solder job merits our careful attention as well as the finest diamond work. If your work has been coming back to you in a slip-shod, don't-care sort of way, SEND IT TO US.

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St. Louis Letter

Attendance at the Fair Immensely Increased

We are glad to note that all through the month of September the attendance at the World's Fair assumed large proportions, and that visitors have been flocking here from all corners of the world. It is pleasant to know that at last it has dawned upon our countrymen, North, South, East and West, that this is the greatest Exposition that was ever produced, and the present generation will surely not have an opportunity again to see one of such immensity and magnificence. St. Louis is amply prepared to take care of all visitors, charges for good accommodations are extremely moderate, and no extortion is tolerated. The weather is delightful. Besides, the Louisiana Purchase Exposition is the greatest national enterprise and a fitting and worthy commemoration of one of the greatest political events in the history of our country. The following table shows the attendance at the Fair up to the middle of September. The week ending with the 15th was the first one in the history of the Fair that showed an attendance for the six days exceeding 1,000,000. The record admissions for the week were as follows:

Monday	112,432	Friday	131,111
Tuesday	110,616	Saturday	134,607
Wednesday	134,642		
Thursday	404,450	Total	1,027,918

Recapitulation:

April, one day	187,795	August, 27 days	3,088,743
May, 26 days	1,001,291	Sept. 15 days	2,276,208
June, 26 days	2,124,836		
July, 27 days	2,343,557	Total	11,022,430

Chicago Day at the Fair

On behalf of the City of St. Louis and the World's Fair Management, Mayor Rolla Wells and a committee of the Exposition officials called on Mayor Harrison, of Chicago, and presented a formal invitation to the city he represents to visit the World's Fair city and participate in the observance of Chicago Day, October 8th. Mayor Harrison promised the committee to do all in his power to make the day a success.

Come to the Fair

We take it for granted that the great majority of those who read this department of THE KEYSTONE have attended or propose to attend the St. Louis World's Fair, the greatest yet of all Expositions of the world's material progress in the arts, sciences and the industries of life ever yet attempted by man. On the 1st of September our big show entered upon the fifth month of its existence, and is now in the flood tide of its glory. It can be seen to the very best advantage in October and November, but those who want to see this marvelous Exposition should not linger too long in coming to it. October in this region is usually fine and enjoyable for outdoor exercises, and the attendance is expected to reach the 5,000,000 mark for the month. Anything like this number of visitors will make October the banner month of the Fair. We advise all our friends who wish to see the Louisiana Purchase Exposition at its best to lose no time in getting there.

A Memorable Day at the World's Fair

St. Louis Day at the World's Fair was observed September 15th. It has proved a memorable day and was a magnificent success. The jewelry and optical trades observed the day as a general holiday, and all wholesale and retail houses were closed to business. Not only did most of the concerns give their employés a holiday, but quite a number gave them tickets of admission. Every effort was put forth by the Exposition Management and the citizens of the World's Fair city to make it the biggest in the history of the Fair. As a result the attendance was over 405,000, which is double that of any other single day since the opening. This is a most creditable showing, most fitting and gratifying to the great central city of America.

Mrs. E. A. Maxwell, wife of Jeweler Maxwell, of Albion Ill., spent several days in St. Louis last month, enjoying life in the World's Fair city while looking over the Louisiana Purchase Exposition.

M. E. Sawyer, of Hamburg, Ark., spent a few days with us last month, combining some buying with an examination of our wonderful World's Fair.

H. W. Wood, of Colfax, Iowa, was among the throng of jewelers who were here last month doing the World's Fair. Mr. Wood was well pleased with our big show.

C. H. Noyes of Paris, Tex., was among the many representatives of the Lone Star State who spent time here last month viewing our wonderful Exposition as well as doing some of his fall buying.

Goodman & Snuffer, of Memphis, Tenn., were represented in this market last month by Mr. Goodman, the head of the firm, who was here doing some buying and enjoying a few days looking over the delights and wonders of our World's Fair.

Jeweler J. H. Smythe, of Fort Smith, Ark., accompanied by his family, was doing the Fair for a week last month and enjoying it greatly.

F. W. Sellers, the well-known jeweler of Wellington, Kans., was here for several days last month, doing the Fair.

P. P. Neill, of Clarendon, Ark., was in the city for a few days last month, combining his fall buying with an examination of our World's Fair.

M. L. Truby, the well-known jeweler of Independence, Kans., spent a week in the World's Fair city last month, looking over the Louisiana Purchase Exposition and doing some of his fall buying.

William Welch, of Demopolis, Ala., was a welcome visitor in this market last month. Mr. Welch was spending a few days here doing the big show at Forest Park as well as looking after his fall buying.

Charles Mosby, of Batesville, Ark., was a visiting buyer in this market for some days last month. Mr. Mosby spent a greater part of his time while in town enjoying the sights at the World's Fair.

W. E. Fenstermacher, of Beloit, Kans., spent a week in town last month, visiting our World's Fair, to his delight and pleasure.

F. D. Taylor, of Hobart, Okla., spent some days in St. Louis last month, selecting his fall bills and viewing the sights at the World's Fair.

Jeweler Ralph Wickliffe, of Arkansas City, Kans., and Mrs. Wickliffe, spent a week in St. Louis last month, enjoying the sights and wonders at the World's Fair.

Ernest Leben, of Jennings, La., was among the many Southern jewelers who spent some little time here last month, viewing the World's Fair and doing some buying for their fall trade.

A. L. Boneswell, of Gibsonburg, Ohio, enjoyed the delights of life in the World's Fair city for a few days last month while he investigated our wonderful Exposition.

Alfred M. Ward, of Abilene, Kans., accompanied by Mrs. Ward, spent a week in St. Louis last month, taking in the Fair.

The Cook Jewelry Company of Fayetteville, Ark., were represented in this market last month by J. M. Cook, who was here doing some buying and looking over the World's Fair.

C. R. McCulloch, of Point Pleasant, W. Va., was here for several days last month, taking in our World's Fair to his pleasure and profit.

The T. K. Smith Jewelry House, of Oskaloosa, Iowa, was represented in this market last month by L. E. Smith, the head of the house, who was here for a week, enjoying the delights of the Fair as well as doing some fall buying.

Reid Lawson, with the Calhoun Jewelry Company, of Birmingham, Ala., spent a number of days in St. Louis last month, looking over the World's Fair.

Dowell & Wallace, of Walnut Ridge, Ark., were represented in this market by W. A. Dowell, who was here for several days, selecting fall novelties and viewing the sights and wonders at the Louisiana Purchase Exposition.

Fred L. Miller, with Brown & Borsheim, Omaha, Nebr., spent several days in St. Louis last month, taking in the big show at Forest Park.

Edward Vail, the well-known Wichita, Kans., jeweler, and Mrs. Vail, spent a number of days in St. Louis last month, doing the World's Fair.

Joe A. Harris, of Waxahachie, Tex., spent a week in this market last month, looking over the St. Louis World's Fair and doing some buying.

M. T. Graham, of Fort Smith, Ark., was in St. Louis for several days last month, looking over the Fair and doing some buying for the home market.

I. T. Gabbert, of Caldwell, Kans., was among the many jewelers from the Sun Flower State who spent some time here last month, looking over our World's Fair.

J. F. Clark, of Abilene, Tex., was among the throng of Southwestern jewelers who were in this market last month, visiting the World's Fair and looking after their fall buying.

Phil Levy, of Henderson, Ky., was among a number of jewelers who were in St. Louis from the Blue Grass State last month, looking over the World's Fair and doing some fall buying.

T. A. Mauch, of Yazoo City, Miss., spent a week here last month, doing his fall buying and looking over the World's Fair.

R. L. Waggoner, of Mangum, Okla., was in St. Louis for several days last month, viewing the Fair and attending to his fall buying.

Theodore Neuhaus, of Theo. Neuhaus & Co., Cincinnati, was here for a fortnight last month, enjoying life in the World's Fair city while looking over the Louisiana Purchase Exposition. Mr. Neuhaus was a member of the International Jury of Awards passing on the exhibits of jewelry and silverware, and was kept pretty busy during his stay. Mr. Neuhaus said to THE KEYSTONE representative that the Exposition was an artistic success as well as otherwise, but that he believed it would require six months of hard work to see everything that is displayed in the fourteen exhibit palaces, to say nothing of the minor exhibit structures, the forty foreign pavilions, the forty-five State buildings, the groups, fountains, gardens, and the incomparable Pike. Still he had time to see, in his short stay, that which would require a life-time of travel—that which no college or university could give in a hundred years. Mr. Neuhaus was warm in his praise of the foreign exhibits, which he thought far surpassed anything that had been seen at previous expositions.

Jeweler H. G. Petty and wife, of Fort Collins, Colo., spent some days in St. Louis last month, enjoying the delights of the World's Fair season. They were greatly pleased with our big show and regretted they could not stay with us longer.

Mauch & Adams, of Marshall, Mo., were represented in this market last month by

(*Continued on page* 1587)

GOLD FILLED
G.A.M. & Co.
TRADE=MARK

REMEMBER

that our prices are as low as any conservative wholesale dealer could ask to have them, when the quality of our stock is taken into consideration, 1-8, 1-10, 1-15 seamless gold filled. Our woven wire fobs are 1-15, which is more than 150 per cent. better than the 1-40 ones floating on the market. Our elegant new fall styles, embracing all novelties in chains, are ready for jobbers' inspection.

1000 NEW STYLES

METAL FOBS, VIZIER CHAINS, VEST CHAINS, LORGNETTES, NECK CHAINS, CHATELAINE PINS, BRACELETS.

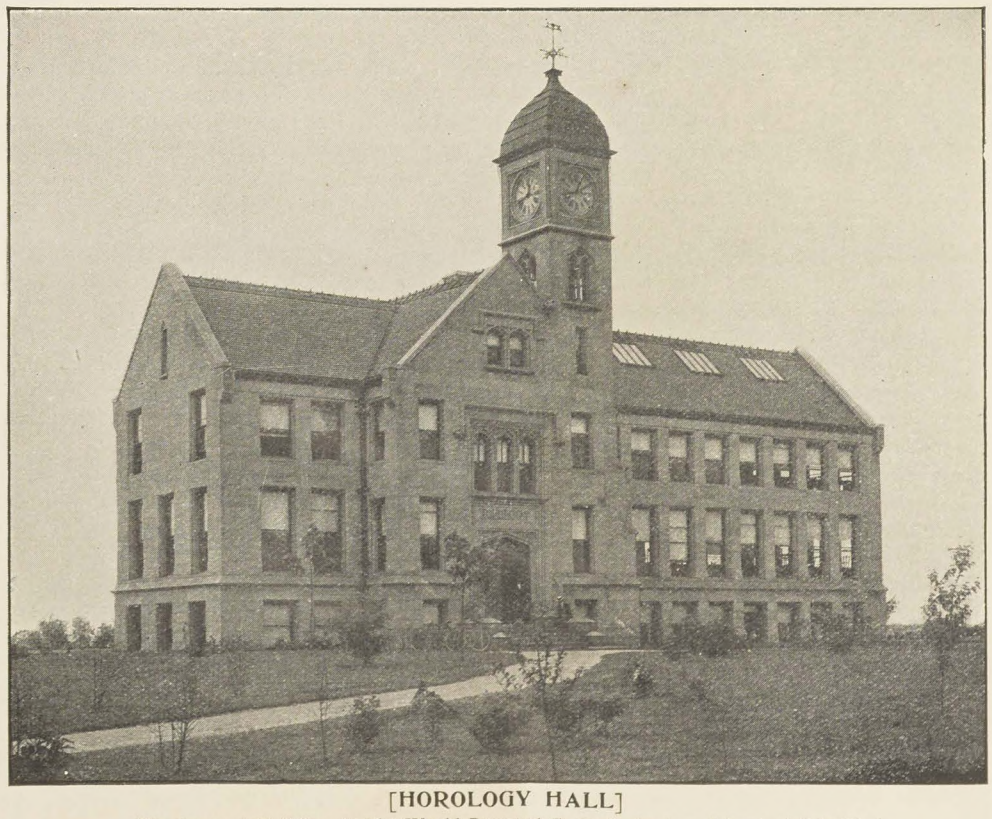
We make goods that will give the consumer satisfaction

C. A. MARSH & CO., ATTLEBORO, MASS.

FOR MANY YEARS

You have been saying to yourself, just as soon as I am able and can spare the time, I am going to take a course in a good Horological School and learn the art of Watch Work, Jewelry Work and Engraving, so that I will be competent to turn out the best work and an ***authority on Horology in my community.*** This year you had to see the Great Fair. Begin 1905 by fulfilling the promise made yourself and start in at the ***Horological Department, Bradley Polytechnic Institute.***

Do not put it off. Send postal card to-day for ***free*** catalogue.



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Birmingham, Ala., Letter

Business Improving

Business conditions have livened up during the past three weeks in all lines, though the strike of the miners in the Birmingham district has had a bad effect so far as the Birmingham dealers are concerned. The situation is looking better, however, and it is expected that there will be nothing to complain of by the middle of October. In the country districts all is well. Cotton is coming in at a lively rate and is bringing ten cents and over, all of which assures prosperous times. With the good year of the farmers last season, and the high price of the staple, they got relieved of their debt, and this year what they have made is largely surplus. Corn and minor crops are plentiful. The small amount of coal mined by the furnace men has had a tendency to stiffen the price of iron, which helps the industrial districts. Several furnaces which have been idle have begun work, and the big new stack at Battelle has been fired up.

Trade Trickery

Hardwick Ruth, of the firm of C. L. Ruth & Son, Montgomery, tells of the reprehensible methods of trading practiced by at least one St. Louis jeweler. While in the exposition city last month, Mrs. Ruth and a friend saw some combs in a window display in the house of an Olive Street concern, and as the place looked in every way decent, they went in and priced them. Mrs. Ruth having said something about being the wife of a jeweler, a concession price of $3.50 each was made, which was much below the regular price they were informed. Mrs. Ruth bought the comb, and her friend purchased a similar one, with some side combs also, making the bill of the latter $7.50. Walking down the street they overtook the gentlemen and told them of their purchases. Mr. Ruth smiled and said: "I have just priced the same thing at a department store for $1.50, and at a jewelry store, near where you got them, for $2." Mr. Ruth then walked back to the store and asked the man to show him the combs, which he did, making a price of $3.50, then $2.50 although he had told Mrs. Ruth $3.50 was a concession, $5 being the regular price. Mr. Ruth then told him the price was exorbitant and the business methods a disgrace to the calling, and asked if he would not refund a part of the money. This was refused, as well as a request to exchange for goods desired in the stock. Mr. Ruth tells the story simply to show that there are disgraceful practices at St. Louis, and it is to the advantage of the trade to show them up. He says he will be glad to give the name of the offending firm to any who may inquire.

F. W. Bromberg, the well-known Birmingham jeweler, was victimized last week by a slick negro, but fortunately he recovered the goods. The negro, who gave his name as Alla Moore the first time, and Ed. Young the second, bought a diamond ring, a watch and chain, on notes, and by giving the names of men who worked for the railroad for which Bromberg is the watch examiner. Suspicion was aroused and officers were put on the track, who soon had him in jail. The real name of the negro is Ula Davis, though he gives it as John Henry Davis sometimes. His plan was to go around and get the names of reputable negro workmen and trade on them in getting goods by instalment.

George A. Poetz, successor to A. Poetz & Co., Mobile, has been in business in the Gulf City for fifty years, beginning in 1850. They have come up from a small beginning to a modern store with every modern department, including an optical store which has only recently been put in.

C. B. Sargent's jewelry store, at Cullman, was robbed of $200 worth of goods, the entrance being made by a barefoot boy, as the tracks nearby show. Entrance was effected by a transom over the door. Five gold watches, fourteen fine rings, four heavy watch chains and four pearl-handle knives are missing.

Mrs. M. E. Abbott, of Birmingham, died a few days ago. She was the mother of H. C., A. V. and W. C. Abbott, who own the big jewelry store of Abbott Bros., on Second Avenue. She was one of the most highly respected women in Birmingham.

Reich's jewelry store at Columbus, Ga., has put in a line of kodaks.

The firm of Webb Bros., composed of H. Y. and C. A. Webb, Greensboro, has been dissolved, C. A. Webb retires and leaves the conduct of the business to his brother.

Jeweler Adams, of Thomasville, has put in an optical stock.

Omaha and the West

Good Prospects for Fall Trade

In wholesale and jobbing circles there exists the highest anticipation of an extensive fall business. This has for its basis the success of the Nebraska crops and the high prices which have been caused by failures elsewhere. At the present time the farmers are making over a dollar for their wheat. From this crop alone some of the farmers will make small fortunes at a single stroke. In addition they will have a corn crop, which for quantity and quality has never been excelled. In other years, when times were hard and prices low, it was estimated that if the farmer received eighteen cents a bushel for his corn he would make money. With prices now ranging between fifty and sixty cents a bushel, the farmer will doubtless fare extremely well. In Nebraska farms of 640 acres are by no means unusual, and in some instances there are farms of over a thousand acres under cultivation. Many farmers own two or three farms of 360 acres. Therefore, the farmer who this year clears from $5000 to $10,000, or even $12,000, will not be a rarity.

Nebraska Wheat Crop Safe

Wheat suffered somewhat in Nebraska as a result of excessive moisture on the lowlands, but the proportion of loss as compared with some of the other States is trivial. Most of the farmers planted a big wheat acreage, and many will sell several thousand bushels. It is this condition which leads the wholesalers to expect a flourishing business during the autumn, and already trade has begun to pick up in spite of the presidential election, which is the only depressing feature. The reason for this unfavorable effect is difficult to discern, but that it exists is attested by all the jobbers. After election business will come with a rush they say. The Ak-Sar-Ben festivities brought many out-of-town dealers to the city, but while they did some buying they were too much engaged in diverting themselves, as a general rule, to pay much attention to business. They know that the representatives of all the jobbing houses will visit them at their home towns, and therefore they have got into the habit of merely making a rush through the displays in the stores during the festival.

D. R. Wilson, jeweler, has disappeared from Shenandoah, Iowa, where he was in business, and his whereabouts at the present time is not known. It is thought by many that he is in Canada. His shortage is said to be about $25,000, which he obtained by the forgery of notes on pianos and jewelry. He is supposed to have taken $12,000 in cash with him. He owed a small account with the Shook Mfg. Co., of Omaha.

C. Kohn and J. J. Kirschbaum were arrested in Lincoln recently on the charge of stealing diamonds and jewelry. Kohn had in his pockets jewelry to the value of more than $1000. It consisted of a diamond sunburst, a diamond brooch with eleven sets, two diamond-set charms, two garnet rings, four watches, one knife with a diamond in the handle and an opal ring. The police believe the jewelry was stolen in the East, inasmuch as they received no reports of stores having been robbed in this section of the country. Kohn refused to say where he got the jewelry. Kirschbaum refused to say anything about himself except that he had been working with Kohn at Bonesteel, which was recently the scene of the Rosebud drawing, and attracted crooks from all parts of the country.

J. C. Grasborg opened a new jewelry store in South Omaha recently. A formal opening was held. The name of the firm is J. C. Grasborg & Co. Hundreds of people viewed the store on the opening night, and more than 1000 souvenirs were distributed. Mr. Grasborg was formerly in the jewelry business at Schuyler, Nebr.

Complaint has been filed in the police court here against Fred. L. Spalding, who says he is from Pennsylvania, charging him with having robbed the Jacobson jewelry factory, in the Arlington Block, at 1511-12 Dodge Street. The stolen property consisted of gold and jewelry to the amount of about $200. The property was recovered from pawnshops in Omaha and Kansas City, and Spalding was arrested on descriptions obtained from the pawnbrokers he had visited. The thief obtained entrance to the factory rooms by means of a skeleton key. Spalding is about twenty-one years of age and is a new crook to the Omaha police. He has confessed to the robbery.

In the retail business diamonds have been selling very well this summer.

Mawhinney & Ryan have entirely relighted their store, securing a much better effect than formerly. This firm has also added a new press in the stationery department.

The stock of D. R. Wilson, at Shenandoah, Iowa, was purchased by Gauss & Simmonds, and was sold at auction.

E. W. Tilley, of Mount Vernon, Wash., who sold out one year ago with the intention of finding a new location, has returned to Mt. Vernon and is again engaged in the jewelry business.

H. L. Moore, jeweler, of Tekamah, Nebr., was in the city recently.

W. H. Whisman, of Whiting, Iowa, was in the city buying goods.

New pupils who are now taking courses at the Omaha Horological and Optical Institute are: Miss Grace Messler, Gothenburg, Nebr.; R. L. Senift, Osborne, Nebr.; Louis O'Hara, Omaha; Lester P. Hatch, Marietta, Kans.; Peter J. Foy, St. Paul, Nebr.

Z. T. Scott, formerly a student at the Omaha Horological and Optical Institute, has taken a position with Mrs. Godfrey, at South Omaha, as a watchmaker.

Dee W. Johnson, Albia, Iowa, was in the city recently and bought an opening stock.

For the Holiday Trade

The artistic beauty which characterizes all designs bearing the "World Brand" trade-mark is emphasized in the "NENUPHAR" pattern, which is now being offered to dealers as particularly adapted to the holiday trade. The design is elaborate, and only the superiority of our die work renders it possible to reproduce the exquisite details. Such is the demand for this line that orders should be placed at once in order to secure timely delivery.

THE "NENUPHAR"

1857
STANDARD OF THE WORLD
TRADE MARK
"WORLD BRAND"
THE AMERICAN SILVER CO.

The "World Brand" Guarantee

We assist the dealer in making his sales by furnishing a quality of silverware that is its own best argument. The fact that our products carry 50% HEAVIER PLATE THAN ANY STANDARD GOODS ON THE MARKET insures them a ready reception on the part of the purchaser. The dealer who neglects to add our popular silverware to his stock is omitting the most profitable line he could possibly carry. Send for our new booklets; they are interesting alike to dealer and consumer.

The American Silver Company

Bristol, Conn.

SALESROOMS

New York **Chicago** **St. Louis**

St. Louis Letter

(*Continued from page* 1583)

Thomas Adams, who was here doing some buying and looking over the World's Fair.

Eugene P. Coho, of the Hamilton Watch Company, Lancaster, Pa., was in St. Louis for several days last month, doing the Fair.

John W. Adams, of Adams & Cooper, Marshall, Mo., was a World's Fair visitor here last month.

George H. Gardiner, with Charles S. Stifft, the well-known Little Rock, Ark., jeweler, spent a week in St. Louis last month, accompanied by Mrs. Gardiner. They were doing the Fair to their great delight and pleasure.

N. Becker, San Antonio, Tex., was among the many Southern jewelers who spent some days in St. Louis last month, looking over the World's Fair while doing their fall buying.

W. G. Speck, of Ripley, Tenn., was in town for several days last month, enjoying the sights at the World's Fair as well as doing some buying for the home store.

W. B. Wiley, of Minden, La., was a welcome visitor in this market last month. Mr. Wiley was enjoying a few days at the World's Fair as well as attending to his fall buying.

M. F. Kohler, of Parsons, Kans., was among the throng of Kansas jewelers here for a few days last month, looking over our World's Fair and doing some fall buying.

Sherman W. Moody, of Grand Junction, Colo., was here for a week last month, taking in the World's Fair and selecting his fall bills.

Charles S. Erber, of Texarkana, Tex., spent a week in St. Louis last month, doing the Fair and selecting his fall goods.

F. W. Swearingen, of Topeka, Kans., was among the many World's Fair visitors here last month from the West. Mr. Swearingen was delighted with our big show and regretted that he had not more time to devote to it.

August Bruder, the well-known jeweler of Fort Wayne, Ind., was here for several days last month, enjoying our World's Fair.

F. J. Jacquemin, of Charles B. Jacquemin & Co., Helena, Mont., spent a week in St. Louis last month, looking over the World's Fair. Mr. Jacquemin was well pleased with our wonderful Exhibition, and said that it was well worth the trip he had made to see it.

H. C. Miller, of Sapulpa, I. T., spent several days here last month, investigating the Fair and doing his fall buying.

R. D. Worrell, of Mexico, Mo., spent several days in town last month, attending to some buying and looking over the Fair.

Dan D. Williams, the well-known jeweler of Emporia, Kans., and Mrs. Williams, spent several days here last month viewing the World's Fair.

S. C. Scott, with the Carter-Allen Jewelry Company, Shreveport, La., spent several days here last month looking over the World's Fair. He was accompanied by his bride.

L. Prager, of Fort Scott, Kans., was here for several days last month, looking over the Louisiana Purchase Exposition.

H. P. Alsted, head of the Alsted-Kasten Company, a leading retail house of Milwaukee, Wis., spent three weeks in St. Louis last month, taking in the World's Fair. Mr. Alsted served as a juror on the International Jury of Awards in the section that passed on the exhibits of the silversmiths, goldsmiths, jewelry, watch, clock and kindred trades, which kept him quite busy for the first ten days of his visit. When met by THE KEYSTONE representative, Mr. Alsted said he found the Exposition of surpassing interest and beauty. That there was not only more to see than there was ever exhibited at any previous Exposition, but more "going on" all the time. He thought our World's Fair should be seen by every American who has any pride in the achievements of his race.

Harry C. Walton, Cincinnati agent for The Keystone Watch Case Company, and Mrs. Walton, spent several days in St. Louis last month, looking over the World's Fair.

J. P. Holland, with the Seth Thomas Clock Company, New York office, spent a few days here last month, viewing the World's Fair.

S. H. Avey, of S. H. Avey Co., Auburn, Nebr., was in St. Louis for a week last month, taking in the Fair and doing some fall buying.

B. A. Isaces of B. A. Isaces & Co., Galveston, Tex., was here several days last month, looking over the big show at Forest Park. Mr. Isaces thought the World's Fair a wonderful success and well worth the trip to see.

The St. Louis Clock and Silverware Company will send out to the trade early in October their new fall catalogue. The new book will be larger and handsomer than usual. It will illustrate and describe the different lines they handle, and the live jeweler will find it a useful and helpful handbook to have around.

J. C. Grogan, head of the well-known retail house of J. C. Grogan & Co., Pittsburg, Pa., was here for two weeks last month, serving on the International Jury of Awards at the World's Fair in the section that passed on the jewelry, silverware, watch and clock exhibits. Mr. Grogan, who was Chairman of the Jury, expressed himself as delighted with the Exposition, which he was seeing at its zenith. His only regret was that he did not have more time to devote to it.

Wm. J. Benn, representative of THE KEYSTONE, and Mrs. Benn, spent several days at the Fair last month. Mr. Benn was glad to be able to look over our wonderful Exposition even for a few days, as he believed it was the greatest educational opportunity of the century.

Leo Bauman, the worthy son of President Samuel H. Bauman, of the Bauman-Massa Jewelry Company, celebrated his twenty-first birthday recently by giving a dinner party to his friends. It was given out at the dinner that one of his presents was a gift of 50 shares of stock in the firm from his father. Young Bauman is a member of the firm's traveling force and has a bright future.

The firm of Kennedy & Co. has been incorporated here with a capital of $10,000, full paid, to do a general wholesale and retail jewelry business. The incorporators are Alexander C. Kennedy, 98 shares; John H. Boka and Arthur C. Engler, 1 share each.

Loftis Brothers & Co., Chicago, have established an exhibit of diamonds and precious stones, with a complete diamond-cutting plant in operation, in the Varied Industries Building at the World's Fair. Their display is a novel one, and attracts large crowds daily.

Geo. W. Ellis and C. R. Gaines, of the Geo. W. Ellis Jewelry Company, Butler Mo., spent a week in St. Louis last month, viewing the World's Fair and doing some fall buying.

E. F. Mayer, of Butte, Mont., was among the throng of Western jewelers who spent several days in the city last month, looking over the St. Louis World's Fair.

Jeweler S. W. White, of Hope, Ark., a familiar and always welcome figure in this market, spent a number of days in the city the early part of last month, in company with Mrs. White, their daughter, Miss Carrie, and Master Fred, doing the World's Fair to their delight and pleasure. Mr. White has been a regular visitor to this market for thirty years past, and never fails to do some buying. He reports business as good in his section, with excellent prospects for a fine fall and holiday business.

A. M. Kelly, of Jefferson, Tex., was among the many jewelers here last month from the Lone Star State, doing the World's Fair. Mr. Kelly was attending to some fall buying as well.

C. F. Kleine, of San Antonio, Tex., was in St. Louis for several days last month, buying goods and looking over our World's Fair.

The Rock Island Jewelry Company is the name of a jewelry firm just opening a new store at Eldon, Mo. Mr. J. Wohlgemuth, the manager, was in this market for several days last month, selecting his opening bill.

Among the many jewelers who were in St. Louis last month, visiting the World's Fair and doing some buying, we will mention the following: George Noterman, Nokomis, Ill.; Aloy Gerber, Edwardsville, Ill.; F. C. Hartleb, Belleville, Ill.; Aug. Winkler, Poplar Bluff, Mo.; J. C. Wieser, Roodhouse, Ill.; J. H. Tetley, Flat River, Mo.; J. H. Perkins, Poplar Bluff, Mo.; W. E. Osterwald, Festus, Mo.; J. W. Acklin, California, Mo.; Wm. Brazeale, Pacific, Mo.; H. Haverkamp, Troy, Mo.; Hy Croessman, Duquoin, Ill.; J. P. Gardner, Sparta, Ill.; R. A. Dunlap, Festus, Mo.; F. Couvoisier, Freeburg, Ill.; C. L. Goulding, Alton, Ill.; E. G. Bersche, Columbia, Ill.; Jas. B. Meyer, Coffeen, Ill.; T. S. McCall, Kirksville, Mo.; W. H. Wheeler, Palmyra, Ill.; A. Y. Boswell, Tulsa, I. T.; J. F. Swain, Sparta, Ill.; R. L. Falk, Bowling Green, Mo.

Victor Hume, of Vicksburg, Miss., spent a week in town last month, viewing the big show at Forest Park and doing some fall buying.

J. T. Inman, of the manufacturing firm of J. T. Inman & Co., Attleboro, Mass., was here a day or two the early part of last month, looking over our World's Fair and calling on our wholesale trade at the same time. Mr. Inman was greatly pleased with our big show.

John F. Boddeker, with Jeweler J. L. Mitchell, Houston, Tex., visited St. Louis for a few days last month. He was looking over the World's Fair, and expressed himself as well pleased with the wonderful Exposition at Forest Park.

Among a number of Iowa jewelers here last month, looking over the World's Fair, was C. Dalin, of Ottumwa. Like most of our visitors these days, he expressed himself as highly pleased with our Fair.

John W. Brenneman, of Terre Haute, Ind., was here last month, combining business with pleasure, though he devoted the greater part of his time to looking over our World's Fair, which he enjoyed greatly.

R. M. Mothner, of Beaumont, Tex., was among the many Southern jewelers in St. Louis last month, doing the World's Fair and some fall buying at the same time. The Ivory City proved a delight to Mr. Mothner and he voted our big show an immense success.

Jeweler J. Louie, of Monroe, La., was among the throng of Southern jewelers who were spending some days in town last month, looking over our World's Fair and attending to their fall buying.

Charles Ragsdale, Brownwood, Tex., spent a week in St. Louis last month, doing the World's Fair and looking after his fall purchasing for the home market.

M. F. O'Brien, with the Illinois Watch Company, Springfield, Ill., was here for a few days last month, looking over the Fair.

Fred D. Studebaker, of Alum Cave, Ind., was in St. Louis for a week last month, looking over the World's Fair, much to his delight and pleasure.

Frank M. Dale, son of Jeweler Dale, Sullivan, Ind., spent some little time here last month, looking over our World's Fair.

J. W. Helfrich, of Carrollton, Ohio, spent a number of days in town last month, doing the World's Fair to his pleasure and profit. Mr. Helfrich expressed himself as greatly pleased with our big show and regretted that he did not have more time on his hands to enjoy it.

Charles S. Stifft, the well-known jeweler of Little Rock, Ark., was a World's Fair visitor here for a number of days last month. He was doing some fall buying as well as enjoying the delights of our big show.

Charles F. Smith, of King & Eisele, wholesale, Buffalo, N. Y., was among the throng of World's Fair visitors in St. Louis last month.

J. P. Miellally, of Indianapolis, Ind., spent several days in St. Louis last month, doing some fall buying and looking over the World's Fair to his pleasure and profit.

S. C. Scott, with The Carter-Allen Company, the well-known jewelry house of Shreveport, La., spent a few days in St. Louis last month, viewing our World's Fair.

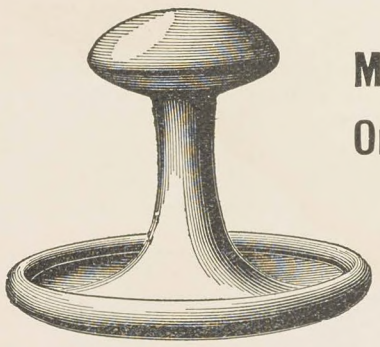
Jeweler R. D. Williams, of Troy, N. Y., spent ten days in St. Louis last month, looking over the World's Fair. Mr. Williams was one of the jurors who passed on the exhibits of jewelry and precious stones.

J. R. Cromer, of Cromer Bros., Fort Worth, Tex., and Mrs. Cromer, spent a week here last month, looking over our wonderful Exposition.

Jeweler John Murbach, of Elyria, Ohio, spent the last week of August looking over our World's Fair, greatly to his pleasure and profit.

The Giant of Collar Buttons

in Quality
in Sales



The Standard Collar Button

Millions of Krementz One-Piece Collar Buttons made, and are sold all over the world

WHY?

Because of their HIGHEST QUALITY, BEST CONSTRUCTION, GIVING THE MOST WEAR, AND GREATEST COMFORT and their IRON-CLAD GUARANTEE.

To verify this we invite the trade to read **"The Story of a Collar Button, with Illustrations,"** which may be had FREE for the asking, and to try the experiment suggested on page 5 of that booklet, by which all may easily determine the exact amount of 14 K. gold in Krementz plate.

Extract from "Printers' Ink," Nov. 23, 1898.

The Little Schoolmaster now suggests, to every pupil in his class, to send a two-cent stamp to Krementz & Co., 49 Chestnut Street, Newark, N. J., and ask to be favored with a copy of their leaflet, "The Story of a Collar Button." Afterward, if any pupil will send to *Printers' Ink* another leaflet, new or old, that is half as good as this one, or that approaches it in excellence, the deserving student will be rewarded with one of *Printers' Ink's* souvenir spoons as an acknowledgment of his discovery and contribution. "The Story of a Collar Button" is the best piece of advertisement construction that has come to *Printers' Ink's* attention in the year of our Lord 1898.

Should you wish to utilize this booklet to increase your collar button business, we will, on receipt of your order, print your card upon and send you a quantity of them.

The several qualities of Krementz One-Piece Collar Buttons are stamped as follows, ON BACK:

Patent Sustained by United States Supreme Court

Quality and Construction have made Its Reputation

All Krementz Collar Buttons—of every quality—are Manufactured by

KREMENTZ & CO.

in their Factory

49 Chestnut Street
NEWARK, N. J.

PARKS BROS. & ROGERS
20 Maiden Lane, New York
Selling Agents to Jobbing Trade

Clean to Handle

The Best Pen in the World

Every Pen Unconditionally Warranted

All Pens Shipped Filled Ready for Use

SEND FOR CATALOGUE

American Fountain Pen Co.

168 Devonshire St., Boston, Mass.

RINGSET COMPANY

are selling their ringset outfits for making fifty different styles of wedding rings, any finger size, for $25; uncut mold-blocks, $6 per gross; single sample molds, any size and weight of wedding ring, 10 cents. As to our Outfits and new Burno Crucible, see KEYSTONE for Nov. and Dec., 1903, and June and July, 1904.

We manufacture many styles of Diamond Settings, Tiffanies, etc., molds $1 a dozen. Rings made in our molds equal to the best of wrought work. Catalogue on application.

Address

8 Waltham Street, BOSTON, MASS.

Dallas and the Lone Star State

R. L. Morehouse, at one time in business at Fort Worth, but who has been traveling over the country of late years for his health, is now with Hunter & Freeman, of Belton. His health is much improved.

Ed. Newman, who has been working for H. D. Leffel, of San Angelo, has resigned his position and gone on a large ranch near San Angelo.

B. R. Stocking, of Belton, is having a stone building repaired and fitted up as a jewelry store.

S. R. Glidewell, of Whitewright, was a recent buyer in this market.

M. Holland, of Marshall, was in Dallas recently buying his fall stock.

Joe M. Wilson, who has been with G. A. Pfaeffle, of Greenville, for a number of years, has resigned and accepted a position with Morgan & Hawley Co. as engraver.

J. P. Morgan, of Morgan & Hawley Co., has been visiting New York, Chicago and the St. Louis world's fair.

L. D. Wardin, who resigned his position with Morgan & Hawley Co., has gone to California to take a position.

R. L. Russell, of Farmersville, was a recent visitor to Dallas.

J. M. Grogan, of Arlington, was visiting in Alabama for several weeks recently. He is now busily engaged in preparing for his business.

J. H. Hill, Jr., of Rockdale, has recently been taking in the world's fair.

W. M. Kidd, with Shuttles Bros. & Lewis, has returned from the St. Louis fair.

H. C. Leach, of Beaumont, spent a week in St. Louis last month.

P. W. Denny, of Springtown, was a welcome visitor and buyer in the Dallas market recently.

A. M. Wesson, of Midlothian, purchased his fall stock in this market recently.

S. H. Babb and family left on September 21st for a visit to the world's fair, and will extend their trip to Chicago.

W. T. Morehead and Frank E. Yantis, jewelers, of Sulphur Springs, who were both ill recently, are again able to attend to business.

O. H. Ross, of the Ross Jewelry Co., of Waxahachie, will open a store in Fort Worth, in conjunction with Jeweler Armstrong, of that place. The firm will be known as the Ross-Armstrong Co. Bismark Heyer will continue as formerly as manager of the Waxahachie store.

A. A. Everts, of Dallas, spent several days in Waco, recently, going as delegate to the State Prohibition Convention.

T. J. Dantzler, of Corsicana, contemplates moving into a larger store, which he intends to furnish in handsome style.

Mr. Guthrie, formerly watchmaker for L. E. Griffith, of Terrell, has invented an ingenious electrical machine, and has sold it to a St. Louis firm, with which he has accepted a position.

Geo. F. Flynt, of Mineola, has moved into his new store, which is one of the handsomest in East Texas.

J. G. Thompson & Son is the name of a new firm which has recently gone into business at Corsicana. Mr. Thompson, Jr., was formerly in business at La Port, Texas.

J. O. Baker, of Collinsville, was in Dallas, recently, purchasing his fall stock.

J. A. DeGaugh, of DeGaugh Bros., of Terrell, Texas, recently left on a visit to New York and the St. Louis world's fair.

J. V. Searcy, formerly of Terrell, is now at Wills Point and is well pleased with his new location.

Bismark Heyer, of the Ross Jewelry Co., of Waxahachie, was recently called to the bedside of his wife, who has been ill at her old home in Columbus, Texas. We hope soon to be able to report Mrs. Heyer's complete recovery.

G. C. Newton, of Waxahachie, went to St. Louis, recently, to visit the World's Fair.

J. Levytansky, of Waco, has his new store building nearly completed, and when fitted with the new fixtures which he has ordered it will be one of the finest stores in that part of Texas.

Kansas City and the Great Southwest

Improving Trade Conditions

Everybody in the jewelry business is in a much better frame of mind than at the same time last month. Business has picked up finely during the past few weeks, and the cry of "presidential year" has ceased to have any terrors. All of the big jobbing houses report that business last month was up to the mark of the same month in 1903, and now with the fall season opening up there seem to be prospects of a very good trade in spite of the election. Conditions throughout the country are improving, and things in general are turning out much better than was expected in view of the unprecedented rains and their effect upon crops in Missouri, Kansas and Nebraska.

The Fall Festivities

Next week will mark the annual fall festivities which have come to be a part of life in Kansas City. A large crowd is expected from out of town, and the wholesale houses are always thronged with visitors who combine bnsiness and pleasure. This season many are expected to take advantage of their stop-over privileges on St. Louis tickets and take in Kansas City's big show. One well-known wholesale jewelry firm has printed on all of its envelopes the line, "Take advantage of the stop-over on your St. Louis tickets and come and see us." The fall festivities this year are unusually elaborate. They will include the great electrical parade of the Priests of Pallas, October 4th; the Priests of Pallas ball, October 5th; concerts by Sousa's Band and the Epperson Megaphone Minstrels, October 6th, and the big bal masque of the Priests of Pallas, October 7th.

The Meyer Jewelry Company is still looking for new quarters, and is considering several locations, though none has as yet been decided upon.

J. Dorst, of Dorst & Co., has gone to Cincinnati to remain several weeks at the home factory.

J. D. Taylor and wife, of Hobart, Ind. Ter., passed through Kansas City, en route home from the world's fair, last month.

J. R. Mercer, who has been fishing at Catalina Island, is the hero of the season at that popular resort. He recently succeeded in landing a 306-pound sea-bass, which he captured after a desperate struggle lasting forty-two minutes. Next!

O. G. Cady, of Alamogordo, New Mexico, called on the Kansas City wholesale houses last month.

L. D. Harry, of Norwich, Kans., and J. G. Bellamy, of Slater, Mo., bought goods here last month.

Mr. Hinsey, of Hinsey & Meinhart, Muskogee, Ind. Ter., was a Kansas City visitor recently.

C. W. Crosby, formerly of Dubuque, Iowa, has opened very handsome optical parlors in the Owens Building, Eleventh and Walnut Streets.

F. J. Waltman, the manufacturing jeweler, of Quincy, Ill., spent a short time in Kansas City, en route home from Colorado.

Felix Fricke, of Meyer's, accompanied by Mrs. Fricke, has returned from the world's fair.

Harry B. Carswell made one of the largest retail sales of silverware that has been made in Kansas City lately. He fitted out a chest of 350 pieces of solid silver which was ordered by a wealthy resident of Acandra, Mexico, as a wedding present for his daughter. The silverware was in the Stratford pattern, and the chest included every known sort of flatware. In addition to this chest of silver, the same purchaser ordered a solid silver tea set of five pieces, the price being $265.

Otto Snyder, of Hammel, Riglander & Co., of New York, was a passenger on the Rock Island train which was held up in Illinois on the night of September 12th. No attempt was made to rob the passengers, so Mr. Snyder escaped with a whole pocketbook but with a considerable shock. When the train was halted Mr. Snyder put his head out of the window to see what was the matter, and found himself looking down the barrel of a six-shooter, as a voice told him with more force than elegance to "duck his nut." Needless to say he obeyed, and all of the passengers kept very quiet while the robbers looted the express car.

Andy Manifold, of Beloit, Kans., was a visitor to the Kansas City wholesale houses lately. Mr. Manifold was also particularly well known for his connection with the Beloit Band, one of the best of such organizations in the State of Kansas. His friends expected him to talk band as usual, and were surprised to find on the occasion of his last visit here that Mr. Manifold had adopted another hobby in the automobile. He is the owner of a fine machine, and has become a devoted enthusiast on the subject of motoring.

John M. Scott, formerly manager of the optical department of Emery, Bird, Thayer & Company, has opened new optical parlors of his own at 1025 Main Street.

L. Megede, of Richmond, was a visitor to the Kansas City wholesale houses recently.

F. Kolstad, of Pleasant Hill, called on Kansas City friends last month.

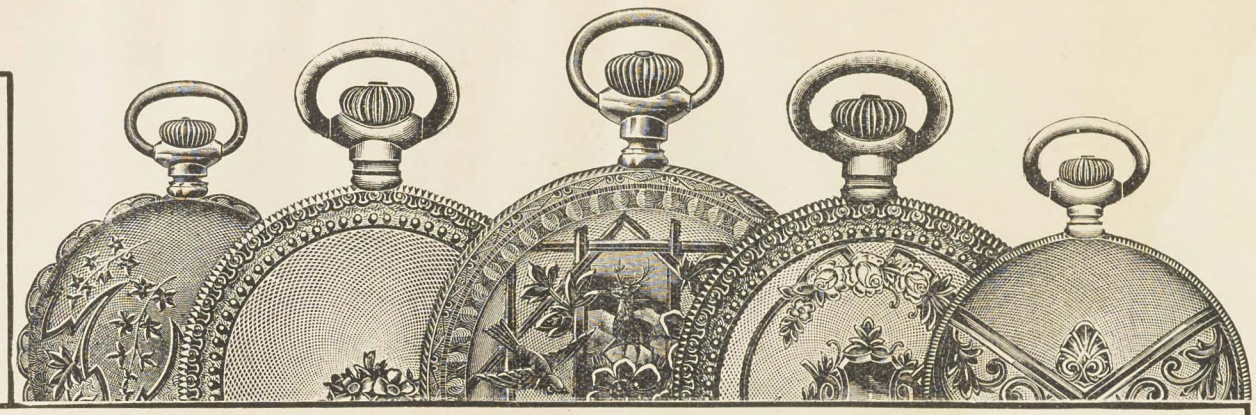
Harold Bradshaw and Louis Hayman, of Meyer's, are back from a trip to the world's fair.

F. D. Reynolds, formerly with J. S. Pfeiffer Parsons, Kans., has succeeded F. C. Fagercrans, of Topeka, Kans.

A. G. House, formerly of Belton, Mo., but now of Philadelphia, visited Kansas City recently.

Among the out-of-town jewelers and opticians who called at the wholesale and jobbing houses during the last week were: T. S. Mendenhall, Burr Oak, Kans.; W. W. Whiteside, Liberty, Mo.; R. O. Shenkner, Weston, Mo.; F. M. Dillon, Bonner Springs, Kans.; S. J. Huey, Excelsior Springs, Mo.; W. E. Crellin, Chillicothe, Mo.; M. O. Stanley, Gallatin, Mo.; C. K. Shortless, Coalgate, Ind. Ter.; W. H. Meyer, Lawson, Mo.; B. G. Gustafson, Lawrence, Kans.; J. B. Hampton, Colby, Kans.; Gordon Rushmer, Pueblo, Colo.; Frank Sparks, Loyalton, Colo.; Mr. Bass, of the Bass Jewelry Co., Huntsville, Mo.; W. M. Kassell, Pittsburg, Kans.; C. E. Durall, Kincaid, Kans.; C. A. Clement, Springfield, Mo.; Walter Starcke, Junction City, Kans.; George Powell, Mena, Ark.; W. F. Brown, Sterling, Kans.; J. A. Schmidt, Leavenworth, Kans.; J. A. Mosher, Burlington, Kans.; F. D. Reynolds, Topeka, Kans.

Watch House of the Northwest



WATCHES ARE OUR SPECIALTY

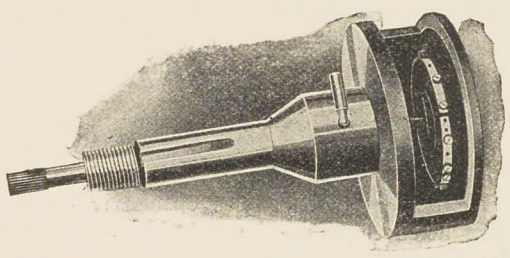
We have concentrated all our attention, energy, resources, experience and enthusiasm on this one line. That's why we can justly claim leadership as the watch supply house of this section, and prove our claim by a stock so large and comprehensive that *every watch need* of the jeweler can be supplied promptly and satisfactorily—a little better, a good deal quicker and more to his advantage than from any other center.

We are in closest touch with the leading watch and watch case manufacturers, and are headquarters in this section for Elgin and Waltham movements and all the standard makes of cases. Our Railroad Watch Department is given our special care and attention.

We issue no catalogue and sell to jewelers only. Consult your self-interest and communicate with us. You will find it a convenience and an economy.

ALBERT L. HAMAN, WATCHES AT WHOLESALE
281-282 Endicott Building, ST. PAUL, MINN.

CULMAN
Balance Chuck



For Refinishing Balance Pivots, without removing the Hair-spring or Roller, and protecting them while the pivots are being polished.

THE GREATEST TIME-SAVER EVER OFFERED TO A PRACTICAL WATCHMAKER.

Its essential points are: It will hold true anything with conical pivots, such as balance wheels, escape wheels, and pallets of high-grade watches; also all cylinder balances. It gives you the entire length of the pivot to work on; it protects the part held from any chance injury.

No more twisted hairsprings, bent balances or cracked rollers. It is impossible to remove a hairspring or roller without getting the balance out of true, which changes the rating of the watch, and causes the loss of much time to true up the balance again. All this is avoided by the use of my chuck.

You can do a better job with it in two minutes than you ever could in the old way.

Once accustomed to its use, you will never be without it, and you will use it oftener than any other chuck you have.

PLEASE MENTION NAME OF LATHE WHEN ORDERING.

I reserve the right not to make these chucks for obsolete lathes for which there will be too small a demand.

Is your time worth anything? Then save it. Read these letters from satisfied customers:

A. K. JOBE
DIAMONDS, WATCHES AND ART WARES

Jackson, Tenn., July 11, 1904.

MR. C. CULMAN, St. Louis.

Dear Sir:—I take pleasure in paying for the Balance Chuck you sent me June 15th. I find it is in use almost daily in my watch repairing department and saves lots of time.

Very truly yours, A. K. JOBE.

ALFRED H. KENT
JEWELER, STATIONER AND OPTICIAN

Mt. Clemens, Mich., July 30, 1904.

MR. C. CULMAN, St. Louis, Mo.

Dear Sir:—I have pleasure in informing you that the chuck which I purchased of you some time ago is very satisfactory; I find it a great time and labor saver.

Respectfully,
ALFRED H. KENT.

T. A. MAUCH
WATCHMAKER, JEWELER AND OPTICIAN

Yazoo City, Miss., July 31, 1904.

C. CULMAN, St. Louis, Mo.

Dear Sir:—Enclosed find check for $3.50 in payment for one of your Balance Chucks, and will say that as a time saver and an all-together practical tool, I think it one of the best in use on the bench, and I don't see how any watchmaker would do without it. Hoping it will meet with the sales it surely deserves, I remain

Yours truly, T. A. MAUCH.

WM. BRAZEALE
REPAIRING A SPECIALTY

MR. C. CULMAN. Pacific, Mo., July 27, 1904.

Dear Sir:—In reply to yours would say the chuck is all right and gives good satisfaction. Would not be without it for twice the price.

Yours very truly, WM. BRAZEALE.

Price, $3.50. Your money back if not satisfied—all I ask is give the chuck a fair trial.

Order from your material jobber or direct from the patentee and maker,

C. CULMAN, Watchmaker to the Trade
316 N. Sixth St., ST. LOUIS, MO.

Jobbers supplied by C. Culman, St. Louis, and Hammel, Riglander & Co., 35 Maiden Lane, New York

---

AN EAGLE CHARM that sells at all seasons of the year

Made in 14 K. only

WRITE FOR PRICES

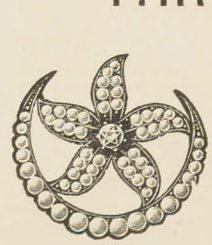
Patented Aug. 18, 1903

No. 400. Genuine Eagle Claw

No. 403. Genuine Eagle Claw 17 Diamonds in Wings

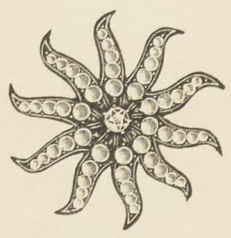
E. SCHMALZ & SON, Manufacturing Jewelers
501-502-503 Chamber of Commerce Bldg., ST. PAUL, MINN.

THREE GOOD SELLERS



2351

6098



2151

2351. Clover and Crescent Brooch and Pendant or Chatelaine, set with 59 genuine half pearls, with diamond center . . . . . $7.50 10 K., $ 8.50 14 K.

6098. Sunburst Brooch and Pendant, set with 98 genuine half pearls, with diamond center . . . . . 9.50 10 K., 11.00 14 K.

2151. Sunburst Brooch and Pendant, set with 50 genuine half pearls, with diamond center . . . . . 7.50 10 K., 8.50 14 K.

Brooches without diamond centers, **$1.50** less for each of the above. We will furnish you with center setting for any size stone without extra charge. **WRITE FOR OUR NEW ILLUSTRATED CATALOGUE OF RINGS AND PENDANTS.** Send in your orders before the rush commences.

S. FRACKMAN, 51-53 MAIDEN LANE, NEW YORK

News from the Northwest

Bright Trade Prospects

Northwestern conditions can only be reported as good. The harvest has progressed just far enough to make us feel encouraged. Everything has been safely housed, and thrashers' reports on all small grain are fully up to expectations. Some localities, as expected, are running poorly, while others, particularly in the southern sections, report the best crop for years. Corn is doing nicely, and if frosts will only hold off long enough and the nice weather continues it will also be a good crop. In the face of this and present high prices there should be an excellent fall business. Of the great crowd of visitors to the Twin Cities last month over 95 per cent. reported prospects excellent and bought accordingly, for which jobbers are very thankful. They are always glad to see their customers face to face, and it does the retailers good to get to market once in a while, renew acquaintances, and at the same time get new ideas to help them along in their business. Travelers report business very good, and home forces are working full time trying to keep even with orders. Collections are reported as coming in better than for some months, and should be even better next month, as farmers are bringing to market the crop which present high prices are bringing in earlier than usual. We know of one farmer who hauled in his wheat, sold it for $1.07 per bushel, saying "there goes my crop of two years ago." This is certainly a fair specimen of the well-to-do farmer in this section. The tornado which visited the Twin Cities August 20th touched the jewelers very lightly. Bullard Bros., St. Paul, Minn., had their swinging watch sign blown down; H. Jacke and C. S. Sutter, St. Paul, had small windows blown in. In Minneapolis about the same damage was done, but at Lake Minnetonka the summer home of Ed. Best, optometrist, of Minneapolis, was destroyed, entailing a loss of $4,000.

Geo. A. Lhamon has left the employ of M. C. Meeker, Farmington, Minn., and will go to St. Joseph, Mo., where he will devote himself to optics exclusively.

The jewelry store of Becker & Klinger, Mitchell, Iowa, was entered by burglars last month, who succeeded in carrying away about $700 worth of goods.

G. R. Oren, formerly at Summit, S. Dak., is now with W. R. Vrandenberg, Superior, Wis.

D. B. Bryant, for several years with W. M. James, Breckenridge Minn., is now on the road for Albert L. Haman, the St. Paul Watch Jobber, and is sure to make a success of it.

H. G. Hanson, Winona, Minn., has gone to work for Foster & Hoover, Truman, Minn.

F. B. Sweazy, for the past year instructor at Stone's School of Watchmaking, St. Paul, has gone in business for himself at Walnut Grove, Minn.

S. J. Stieglitz has moved from Faribault to Crookston, Minn.

Fred Lanctot, Crookston, Minn., reports a new baby girl at home.

Leo Sherfius, Chinook, Mont., was severely burnt by an acetlyne gas explosion last month.

The Goodman Jewelry Company succeed Folker's Jewelry Company at Bemidji, Minn.

Thos. Darrow is a new jeweler at Utica, Minn.

The Anchor Silver Plate Company, St. Paul, had one of the best exhibits at the recent Minnesota State Fair, where they showed an elegant line of goods of their manufacture. They also had a large "Rest Tent" on the grounds, where visitors were allowed free use of chairs, and while resting were entertained by a graphophone concert. Mr. Seliger certainly did himself proud in this act, and thousands of people went home thanking the Anchor Silver Plate Company for its foresight.

B. J. Westinghouse, Wabasso, Minn., sold out his stock to Ernest G. Wing, who has removed same to Comfrey, Minn. Mr. Westinghouse has gone to work for M. C. Meeker, Farmington, Minn.

The stock of W. R. Vrandenberg, Superior, Wis., was damaged last month by gas leaking through a defective plug, which blew out. The loss is estimated at $1,000.

O. K. Berglund, Lake Mills, Iowa, has returned from North Dakota where he has a large farm. He reports his crop good.

John Fisher has begun business at Milner, N. Dak.

Benj. Marx, of D. Marx' Sons, St. Paul, has returned from a six months' visit in Europe.

Floyd Dillon, son of Geo. W. Dillon, Manley, Iowa, is taking a course in jewelry manufacturing and lapidary work at Peoria, Ill.

Mel Sherfius, Sauk Center, Minn., has moved into his new store.

John Buehler, Jr., Waukesta, Wis., a graduate of the Bradley Polytechnic Institute, is now at work for P. A. Clemmer, Cresco, Iowa.

Houghton & Ray succeed E. S. Houghton at Brainerd, Minn.

C. F. Schatz, Wykoff, Minn., is now nicely located in his new store.

O. N. Steenstrup, formerly at Truman, Minn., is now working for A. Bachman, Preston, Minn.

P. A. Schonsberg is a new jeweler at West Salem, Wis.

Clifford V. Bates, Huron, S. Dak., was married at Yankton, S. Dak., to Miss Kate Francis last month.

L. D. Peet, La Crosse, Wis., has moved into his new store building.

J. L. Williams, Zumbrota, Minn., spent several days visiting friends in the Twin Cities last month.

E. C. Bennett has moved from Zumbrota, Minn., to Frederick, Wis.

H. L. Gates, Rochester, Minn., was among the unlucky ones in the Rosebud Reservation drawing. Harvey does not as a rule draw blanks, and was a little surprised.

D. J. Chatham, formerly with Stoddard & Wood, Stewartville, Minn., is now with Martin C. Weyer, Faribault, Minn.

G. B. Ellestad, Lanesboro, Minn., has returned from a three weeks' vacation.

Wm. Pieters, Madison, Minn., has moved into his new store.

H. Abrahamson is now at Wentworth, S. Dak.

R. Branchaud, Cavalier, N. Dak., reports a new girl at his home.

R. W. Main, Cando, N. Dak., is at St. Louis, taking in the fair.

H. O. Sheldon, Bottineau, N. Dak., announces the arrival of a baby boy weighing 15,600 carats.

Otto Mathes, lately with D. E. Farmer, Stewartville, Minn., is now with Stoddard & Wood, same place.

Fred Ohm, Jr., with F. Willman, Stillwater, Minn., spent a week's vacation at Eau Claire, Wis., last month.

Arvid Ostenberg, formerly with A. I. Shapira & Bro., St. Paul, is now with Geo. R. Holmes.

E. J. Collick, formerly with Geo. R. Holmes, St. Paul, is now with White & McNaught, Minneapolis.

Geo. H. Spofford, Long Prairie, Minn., has moved into his new store.

Philip L. Lillie, Spring Valley, Wis., had the misfortune to slip and fall and hurt his hip, which will compel him to stay in bed for several weeks.

H. G. Gebhart, Flandreau, S. Dak., has moved into the post office, and with his handsome new fixtures now has one of the finest stores in his section.

The following took advantage of the low excursion rates to the Minnesota State Fair to visit Twin City jobbers: Geo. B. Johnston, Pipestone, Minn.; A. Nelson, Toronto, S. Dak.; F. K. Randall, Phillips, Wis.; H. G. Engstrom, Cokato, Minn.; S. Hawkinson, Jr., Grove City, Minn.; L. H. Julsoud, Houston, Minn.; Larry E. O'Connor, Grand Forks, N. Dak.; John Boerner, Duluth, Minn.; C. O. Borgesrode, Winsted, Minn.; F. W. Seaman, St. Croix Falls, Wis.; H. O. Thomas, Hampton, Iowa; F. J. Stebbins, Thief River Falls, Minn.; I. M. Radabaugh, Hastings, Minn.; Wm. J. Krueger, North Branch, Minn.; John Koelbe, Park River, Minn.; J. O. Sognesand, Rochester, Minn.; O. Larson, Bowdle, S. Dak.; H. T. Holverson, Alexandria, Minn.; Luther A. Freeman, Cloquet, Minn.; E. F. Minder, St. James, Minn.; Sam B. Millard, Litchfield, Minn.; L. E. Bryant, Belleplaine, Minn.; Nordahl C. Unseth, Grantsberg, Wis.; Paul Gerard, East Grand Forks, Minn.; P. Bloomstrom, Escanaba, Mich.; Herman Osterberg, Superior, Wis.; Wm. Krohn, Annandale, Minn.; J. L. Moody, Ellsworth, Wis.; T. J. Thompson, Barron, Wis.; Stephen Christopher, Duluth, Minn.; A. J. Johnson, Ada, Minn.; C. E. Peterson, Pepin, Wis.; C. C. Raddatz, Lewiston, Minn.; Julius Anderson, Mora, Minn.; E. A. Arhart, Lisbon, N. Dak.; W. M. Jurgeson, Little Falls, Minn.; H. H. Buck, Goodhue, Minn.; Miss Lillie, Spring Valley, Wis.; Fritz Hoefer, Aurora, Neb.; Martin J. Swedlund, Minot, N. Dak.; G. M. Gazely, Arlington, S. Dak.; Louis P. Mahler, Olivia, Minn.; Wm. Lenz, Osakis, Minn.; F. M. Harper, Renville, Minn.; H. C. Thies, Le Sueur Center, Minn.; W. S. Blake, Duluth, Minn.; E. F. Huhner, Stillwater, Minn.; A. M. Wilton, Alexandria, Minn.; H. M. Hitchcock, Redwood Falls, Minn.; J. B. D. Wagner, Morton, Minn.; J. F. Ahearn, Melrose, Minn.; August Gfrever, Stillwater, Minn.; C. H. Nerbovig, Mankato, Minn.; D. S. Rosenthal, Java, S. Dak.; L. Vrana, New Prague, Minn.; D. W. Smith, Pipestone, Minn.; W. W. McGuire, Northfield, Minn.; C. C. Maxwell, Arlington, Minn.; Fred Giehler, Norwood, Minn.; Oscar Blueflat, Edgerton, Minn.; S. J. Stieglitz, Crookston, Minn.; Thos. Yates, West Bend, Iowa; John C. Marx, Shakopee, Minn.; Mark Rideout, Rushford, Minn.; E. C. Bennet, Frederick, Wis.; W. G. Gould, Glencoe, Minn.; W. D. Love, Luck, Wis.; Geo. A. Lhamon, Farmington, Minn.; John Caesar, Stillwater, Minn.; O. K. Berglund, Lake Mills, Iowa; Harry Gaumanthaler, Cass Lake, Minn.; Wm. C. Hudson, Graceville, Minn.; Geo. Charland, South Stillwater, Minn.; Fred Willman, Stillwater, Minn.; F. F. Bigelow, Aneta, N. Dak.; L. B. Wheeler, Dassel, Minn.; J. H. Girvin, Mankato, Minn.; C. T. Stevenson, Madelia, Minn.; John J. Palmer, Redwood Falls, Minn.; H. W. Johnson, Detroit, Minn.; G. R. Oren, Superior, Wis.; Geo. W. Dillon, Manley, Iowa; J. L. Williams, Zumbrota, Minn.; John J. Palmer, Redwood Falls, Minn.; Prof. J. W. Grainger, Rochester, Minn.; H. W. Johnson, Detroit, Minn.

Among the Trade

The trade are invited to send us reliable items of news for this department

Illinois

Edward T. Jenison, of Jenison & Augustine, Decatur, and Charles F. Susens, left recently for St. Paul, whence they started on a trip in a fourteen-foot row boat down the Mississippi. They intend to enjoy themselves in fishing and seeing the cities along the route. The distance comprised in the trip is 900 miles and the time necessary for covering it depends on the weather. As far as the travelers have learned this is the longest trip undertaken in a small row boat since Captain Glazier's voyage in 1881, from the source of the river to the mouth, making a distance of 3185 miles.

Iowa

Herman M. Leffert, the enterprising jeweler, of Council Bluffs, recently issued a souvenir booklet, in which the interesting features and principal institutions of that city are handsomely portrayed. The frontispiece shows an interior view of Jeweler Leffert's store, which is a spacious establishment, with an ornamental ceiling, high-class wall and counter cases and copious facilities for the conduct of the business. A cut of this store also forms one of the illustrations in an elaborate page advertisement of this establishment in a Sunday edition of the Council Bluffs *Nonpareil*. This announcement had for its caption, "First in the Land," a slogan which is emphasized by the picture of an Indian on horseback brandishing a tomahawk. The policy and progress of the business are told in vigorous English, after which diamonds, watches and holiday lines are exploited in turn, the optical department also coming in for adequate notice. This advertising attains to a high standard of excellence as to style and display and should be productive of profitable results.

The Omaha (Nebr.) *Bee* says: I. J. Molby has sold his interest in the jewelry firm of I. J. Molby & Co., Creston, to L. W. Wendle, who has been connected with the firm for some time. The object of the sale is to give Mr. Molby the opportunity to devote his entire time to the music business, which he has only handled as a side line in the past.

Kentucky

T. C. Lewis has purchased the business of Lewis & Ball, Hardisburg, and that concern will hereafter be known as T. C. Lewis & Sons. T. C. Lewis, senior member of the last-named firm, is a well-known jeweler of long experience.

Maryland

J. P. Best, of Church, Pa., recently a student of the Philadelphia College of Horology, has accepted a position with Harper & Taylor, Salisbury.

Massachusetts

Edgar R. Whiting, of Pittsfield, has leased the store in the Root Block formerly occupied by a pharmacy, and has moved his jewelry store from the Burbank Block to the newly acquired location.

The Eagle Jewelry Company, Rosenberg & Co., proprietors, 353 Washington Street, Boston, was the scene of a daring robbery on the evening of September 1st. The store is on the ground floor, with an entrance on the side, the counter running along the side of the store, while at the rear is the safe. The Boston *Herald* states that at the time of the robbery a patrolman, who was passing on the route, had been called to a woman who had fainted very near the store. The officer had called the patrol wagon to take the woman to the hospital, and as it passed, the optician, who has a place in the jewelry store, went out to see what was going on. This left only a clerk in the store and he was taking the valuables from the window to put into the safe, which was open. The thief evidently was watching his chance, as while the clerk had his head in the show window, he crept into the store, and crawling to the safe abstracted three trays containing six gold and six filled watches and a tray containing thirty diamond and ruby rings. After securing his booty, the fellow sprang to his feet and dashed out of the store, the clerk just getting a glance at him as he went through the door. There was a large crowd on the street at the time, attracted by the patrol wagon, and the thief had no difficulty in making his escape up Washington Street and thence up Bromfield Street. The empty trays were found later in an alley off Bromfield Street, where he had thrown them in his flight. The robbery was at once reported to the Court Square station and a general alarm sent out, but only a meagre description of the thief could be given and at this writing he remains unapprehended.

Michigan

Arthur J. Tulian has purchased A. H. Marwede's jewelry business at Alpena. The purchaser was engaged with the former proprietor for about eight years, so he is familiar with the trade in that locality. In addition to his experience in the jewelry business he is a skillful optician, having taken courses in that science at two well-known optical colleges.

Missouri

George W. Bowers, of Bowers & Wyatt, jewelers and druggists, Lucerne, has disposed of his interest in the drug business to Webb Job, who has been connected with the store for several months.

New York

One of the most notable features of the parade in Niagara Falls on Labor Day was the handsome float of Nelson A. Soggs, the well-known jeweler, of Third Street, that city. The sides of the float were of canvas, four and a half by seven feet in size, and the ends three and a half by six feet. The float bore the following signs in bold letters: "Capital and Labor, Stop and Think! Why not go Hand in Hand, thus Prosper Fearing no Man!" The reverse side read: "Be your Brother's Keeper, Not Slave! Not Master!" On the back end it read: "Your cash returned on any transaction if you want it. Soggs, watch doctor and jeweler, 342 Third Street." Perched on top of the rear sign was a large stuffed American eagle. On either side and above the signs were four dozen "long alarm" clocks—ninety-six in all, and the entire lot "making merry chimes." In the center of all waved "Old Glory."

The marriage of Mr. Soggs to Miss Anna A. White, late of King & Eisele, Buffalo, which event we had the pleasure of announcing in our last issue, took place on September 14th, the Rev. C. H. Smith, of Swan Street Episcopal Church, assisted by Rev. Mr. Poland, officiating. The ceremony took place at the home of the bride's brother, 645 North Division Street, Niagara Falls. After the wedding supper Mr. and Mrs. Soggs left for an extended trip, stopping at New York, Providence, Boston, Waltham, and returning via Binghamton, where Mr. Soggs resided for many years.

After an absence of about two years G. A. Durussel, late of New York City, has returned to Oswego, his old home, where he is re-establishing a retail repair business at his old location, 35 Lake Street. He has installed a complete new stock and a handsome set of fixtures, and has had his store considerably remodeled and improved.

A plate glass front window, 10 x 12 feet in size, in the jewelry store of E. H. Thompson, at 302 Connecticut Avenue, Buffalo, was shattered by thieves about 2.30 o'clock on the morning of September 10th, with a crash that awoke nearly the entire neighborhood. The thieves grabbed a dozen silver spoons, jumped into a buggy and drove rapidly away. About three o'clock on the morning of the same day, four men occupying a buggy stopped in front of the jewelry store of A. H. Denny, at 253½ Virginia Street, Buffalo. They attempted to burglarize the store, but were prevented from so doing by the arrival of a patrolman. When the men saw the officer they vaulted into the buggy and rode away. About noontime word was received at police headquarters from King & Eisele, the well-known local wholesalers, that a young man was trying to dispose of some silver spoons to them. The chief of detectives detailed one of his officers to place the man under arrest, it being suspected by the chief that the fellow was one of those who robbed the Jeweler Thompson's store. As the detective stepped through the doorway of King & Eisele's place a young man, who evidently had seen him coming, slipped by him and hurried down the stairs. Although the officer did not know just whom he was to arrest, he suspected at once that the man who had passed him was the man he wanted. The officer started after him, but seeing that he was pursued the man started to run. There were two patrolmen a short distance ahead, and they headed off the fugitive. When the stranger saw that escape was impossible he stopped short, and the detective nabbed him. The prisoner was taken to police headquarters, where he gave his name as Timothy Widman and his age as twenty-four years. When searched a dozen spoons were found in his possession; which spoons, it is alleged, were stolen from the Thompson store. Chief Taylor thought that he had seen Widman before, and in a subsequent search through the rogues' gallery the prisoner's picture was found.

Ohio

L. V. Stone, the well-known jeweler, of Conneaut, has accepted a position as traveling representative of the Rockford Watch Co., of Rockford, Ill. He entered upon his duties in that capacity at the beginning of last month.

Oklahoma

W. A. Wright, the enterprising retailer, of Shawnee, composed a hymn dedicated to his father upon the recent celebration of the latter's seventy-eighth birthday. It is entitled, "My Cross," and besides being a very creditable performance from the view point of literary merit, breathes a fervent spirit of religious faith and resignation. It was published in the Shawnee *Quill* and favorably commented upon by that organ.

Oregon

Simmers & Freitag, composed of G. T. Simmers and L. E. Freitag, have purchased the business of the Baker City Optical and Jewelry Co., Baker City.

Pennsylvania

A pleasant and remarkable reunion of the children and grandchildren of Mrs. Jeremiah Kohler was held last month at Hanover. It was in honor of the forty-eighth birthday of her youngest son, Millard F. Kohler, a popular and prosperous jeweler, of Parsons, Kans., who journeyed to Hanover to be present on the occasion. Four generations of the Kohler family were present, among them a great grandchild of the aged mother.

Utah

The death of Mrs. J. T. Rushmer, wife of Jeweler Wm. B. Rushmer, Ogden and Salt Lake City, occurred at the first-named place on the morning of September 3d. Deceased was very popular in the social life of Ogden. She was especially zealous in the work of the First Methodist Episcopal Church there, and being gifted with musical talent of a high order presided at the organ in that institution. The deepest sympathy is felt for her surviving husband and three-year-old son.

Vermont

N. S. Marshall has sold his interest in the firm of Marshall & Tyrell, Rutland, to F. T. Tyrell, who now conducts the business on his own account. Mr. Marshall entered the jewelry trade in 1872, when only sixteen years of age, at which time only a few of Rutland's merchants of to-day were engaged in business. For the last twenty-five years Mr. Marshall's name has been intimately connected with the jewelry business of the State. His plans for the future are indefinite.

The "CORINTHIAN"
Patented

Roger Williams Silver Co.

make a specialty of Fine Goods in Sterling Silver for the Retail Jewelry Trade

---

Our new line of Hollow, Toilet and Flat Ware is ready for the holiday season

We have extended our lines by adding many pieces at commercial prices, thus enabling jewelers carrying our productions to meet the demand for both the fine and medium class of trade

Our New York salesroom and traveling representatives carry a full line of samples

---

Roger Williams Silver Co.

Salesroom
860 Broadway
New York

Trade-Mark

Factory
101 Sabin Street
Providence, R. I.

Manning, Bowman & Company, Meriden Connecticut

New York
Chicago
San Francisco

Nickel and Silver Plate

New and Original Designs Quality Guaranteed

Chafing Dishes (With Patent "Ivory" Enameled Food Pan) Prize Trophies, Tankards, Etc.

Baking Dishes, Table Kettles, Etc.

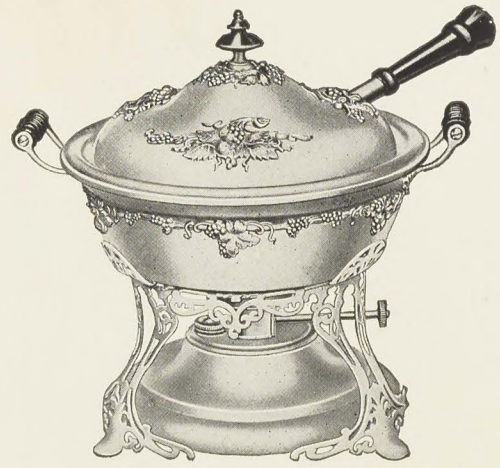
THE BEST KNOWN METHOD FOR MAKING COFFEE OR TEA

No. 1993
"METEOR" CIRCULATING COFFEE PERCOLATOR

Made in over fifty assorted Styles and Sizes

Circular 87K illustrates complete line of Percolators

No. 1158. PRIZE CUP
Solid Copper, English Pewter Mountings



No. 267. CHAFING DISH
Nickel or Silver Plated

All of our Percolators are made with the latest up-to-date improvements. Globes have removable strainers and are interchangeable. The Meteor Lamp can be instantly lighted or extinguished, and regulates perfectly. If you want the BEST Percolator, see that it is stamped "Meteor."

NEW CATALOGUE NO. 40, ILLUSTRATING COMPLETE LINE, NOW READY

HOLIDAY STOCK

Are you preparing for holiday possibilities in watch sales? Are you keeping in mind the lesson of the past few years—the December rush, the scarcity in some sizes, the delays in delivery, the disappointments and even loss in sales.

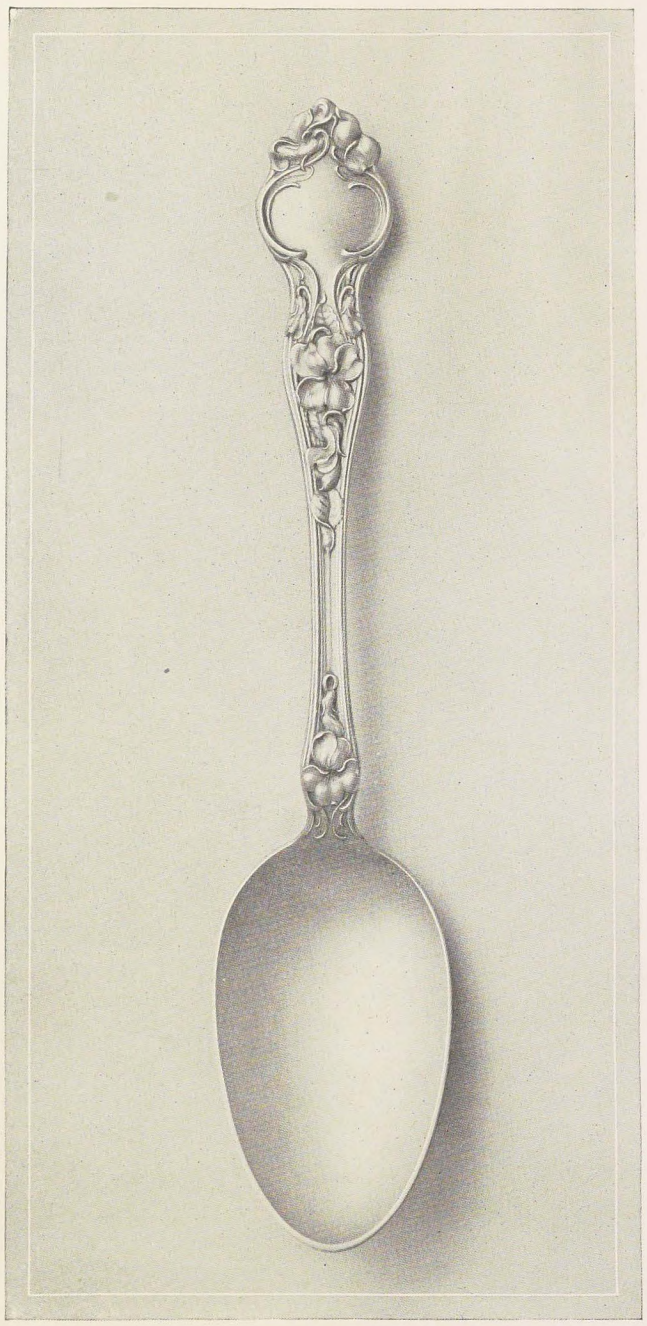
The safeguard for this is early purchasing from a supply house with ample stock to fill trade needs. We assure satisfaction and prompt delivery, the goods you want just when you want them. We have prepared for holiday purchasing with an immense stock of Elgin, Waltham and Hamilton movements and all the standard makes of solid gold and gold filled cases—a safe abundance in every line.

We are agents for Rogers & Bro. celebrated Star brand of silver-plated flatware, and are now showing a great wealth of handsome new patterns.

H. O. HURLBURT & SONS

14 South Tenth Street, Philadelphia

The "Violet" Service in Sterling Silver



TEA SPOON
Full Size

OLIVE SPOON
SALAD FORK COLD MEAT FORK
One-half scale

The "Violet" pattern is really quite unique in design and finish. The workmanship is as usual a trifle higher in standard than might possibly have seemed necessary, but withal the price is most moderate and every indication is that the "Violet" will achieve great success commercially.

If you have not received catalog and price-list of the "Violet" flatware, a request will bring one to you.

R. Wallace & Sons Mfg. Co.

WALLINGFORD, CONN.

NEW YORK—226 Fifth Avenue
SAN FRANCISCO—110 Sutter Street
CHICAGO—131-137 Wabash Avenue
LONDON—63 Basinghall Street, E. C.

¶ We beg to announce that our New York Showrooms, at 226 Fifth Ave., have been entirely remodeled in a most attractive manner. We now have more room for the display of our products, made necessary by the extensive proportions they have assumed. A personal call from you will be appreciated and you will be made very welcome.

R W & S
TRADE MARK
STERLING

This double-page advertisement is one of several that will appear in some of the leading magazines for November

A celebrated artist, with whom we were recently discussing silverware, remarked: "There is a question of wear in the design of a spoon, as truly as there is in its plate of silver."

This expressed the keynote of the Community Silver idea. Will a design wear? Will it please you after it has been on your table for a year? Will its artistic qualities still please you at the end of ten years? This involves a point in the manufacture of silverware which, until we brought out our Avalon and Flower-de-Luce patterns, was overlooked by all makers of plated ware. Even sterling manufacturers, while they had considered the beautiful and the artistic, never clearly recognized the qualities which make a design wear.

Place two spoons of different patterns side by side. Both are new and bright, and you perhaps find difficulty in deciding which is the more attractive. Put them both on your table where you see them every day. You discover to your surprise that one (perhaps the

COMMUNITY SILVER

AVALON

The enormous success of the Avalon pattern is revolutionizing plated ware designs. Here, for the first time, the style and appearance of Sterling is reproduced in plated ware. More than triple plated (Triple-plus). Guaranteed for 25 years.

ONEIDA COMMUNITY, LTD.

ONEIDA COMMUNITY, LTD.

General Offices:
ONEIDA, N. Y.

Branch Offices and Showrooms:
NEW YORK, 395 Broadway SAN FRANCISCO, 134 Sutter St.
CHICAGO, 79 Dearborn St. ATLANTA, GA., Century Bldg.

Silverware Offices and Factories:
NIAGARA FALLS, N. Y.
NIAGARA FALLS, CAN.

Founded in 1848.

This double-page advertisement is one of several that will appear in some of the leading magazines for November

COMMUNITY SILVER

AVALON

It is undoubtedly sold in your town, but if not found readily, we will send, postpaid, as follows:

6 Teas, $2.00 6 Orange Spoons, $3.00 6 Knives (hollow handle), $6.00
6 Forks, $4.00 6 Butter Spreaders, $3.75 6 Knives (solid handle), $4.00

ONEIDA, N.Y.

more glittering and brilliant, with more ornaments and irregularities) becomes at the end of a short time disagreeable to you. You not only lose your liking for it, but are annoyed to see it so often before you. At the same time, the other one grows upon your fancy. Its appearance satisfies you. Your affection for it increases and you dread the time when it will wear out.

Recognition of the above fact and the employment of artists who worked to the desired end, obtained at once for Community Silver one of its chief distinctions. The silver on our spoons wears well. Everyone knows that; but the point which puts our silverware in a class by itself, is the fact that our designs also wear.

Dealers will immediately recognize that the sales of the future depend upon this point. It is certainly an excellent thing to have the silver plate on the spoons you sell wear, but it is the wearing qualities of the design which will bring you repeat orders in the years to come.

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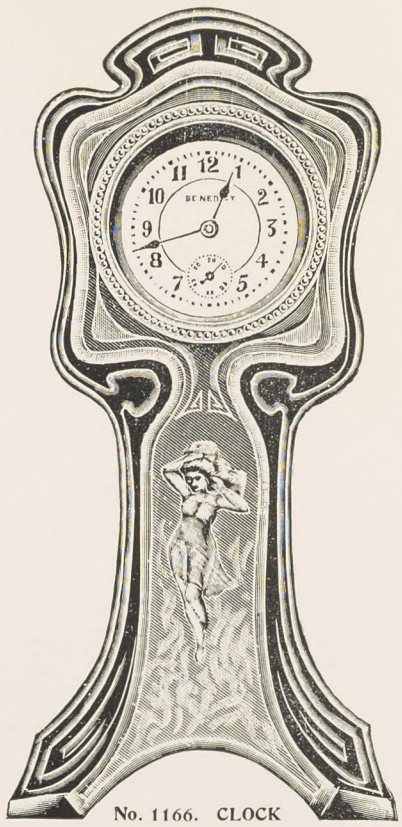
Silverware Offices and Factories:
NIAGARA FALLS, N. Y.
NIAGARA FALLS, CAN.

Founded in 1848.

Write To-Day For Our Four New Catalogues

(FREE BY EXPRESS, PREPAID)

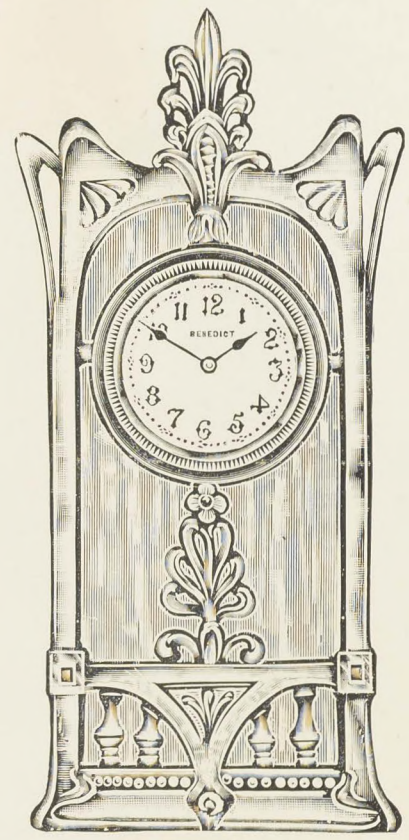
The illustrations below show a few of the Novelties shown in Catalogue No. 29



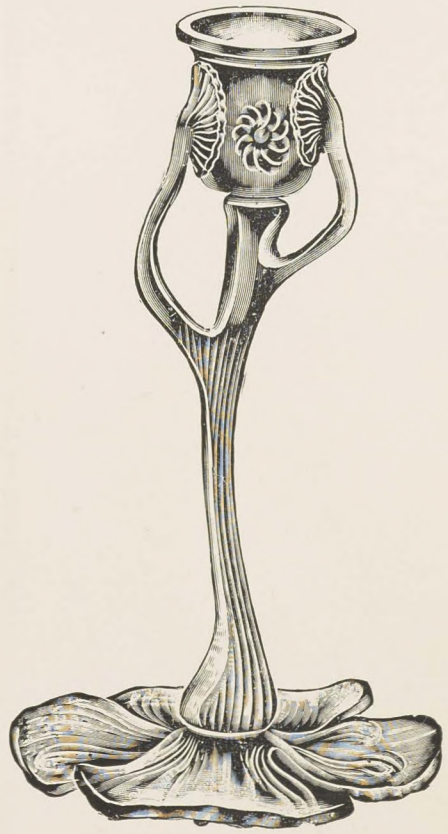
No. 1166. CLOCK
Height, 8 inches

We are, this season, making an extensive line of Art Novelties in French Gray, Ormolu Gold, French Bronze and Venetian Bronze finishes, including

CANDLESTICKS
CANDELABRA
VASES
PIN TRAYS
SMOKERS' TRAYS
INK STANDS
CLOCKS
STATUETTES
JEWEL CASES, Etc.



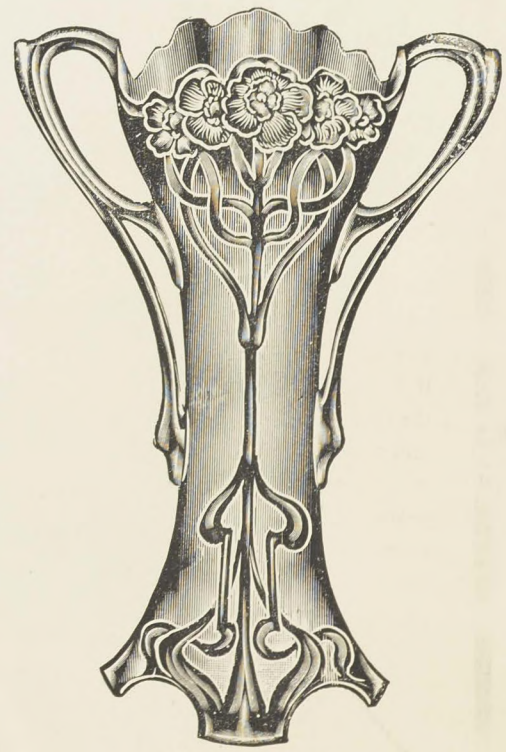
No. 1155. CLOCK
Size, 3½ x 8½ inches



No. 1156. CANDLE
Height, 7 inches

Entirely new and original designs in Quadruple Silver-Plated Hollow-ware, viz:

TEA SETS
WATER SETS
ICE PITCHERS
PRIZE CUPS
TROPHIES
TRAYS
BREAD TRAYS
SPOON BOATS
BON-BONS
CARD TRAYS
BERRY SETS
SALAD BOWLS
CANDELABRA
FRUIT DISHES
CRACKER JARS, Etc.



No. 1164. VASE
Cut ⅔ size

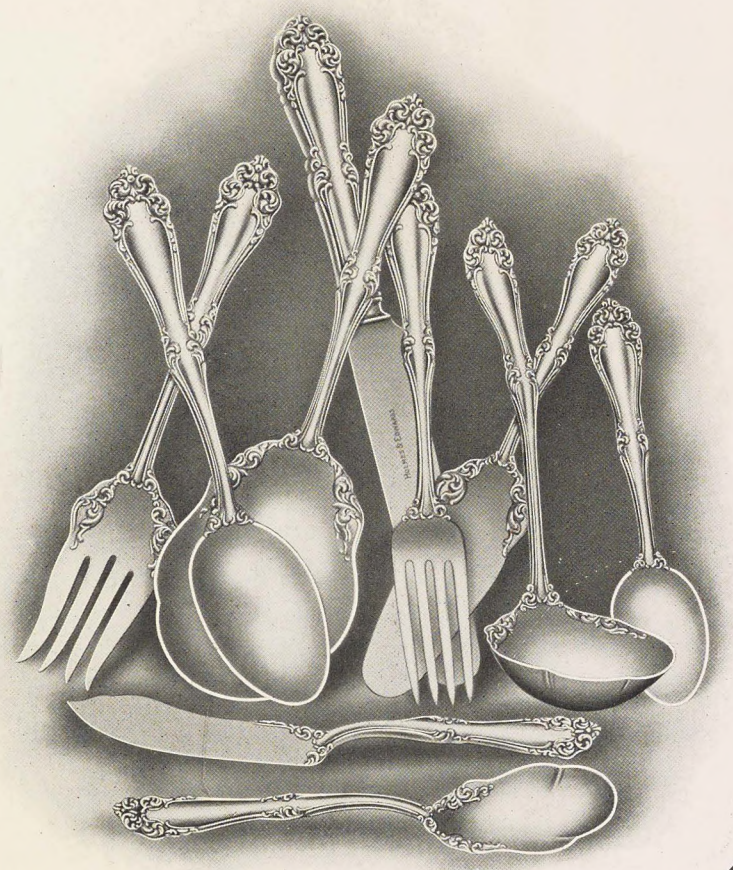
M. S. Benedict Manufacturing Company

CHICAGO OFFICE
109-111 Wabash Avenue

Works and Main Office—EAST SYRACUSE, N. Y.

NEW YORK OFFICE
409 Broadway

THE NEW HOLMES & EDWARDS PATTERNS



The Imperial

in the staple spoons and forks is made only in our Sterling Inlaid quality, and the line will appeal to the most critical trade. Not only is the design exceedingly handsome, but the trade-mark

HOLMES & EDWARDS STERLING INLAID HE

made familiar by our magazine advertising, will insure a satisfactory sale. "Solid Silver Where it Wears" at a fraction of the cost of sterling silver, and "guaranteed to wear twenty-five years," are features worth talking about.

The Orient

is heavy enough for hotel or restaurant use, yet it is neither bulky or clumsy, making it equally as desirable for family use. It bears the trade-mark

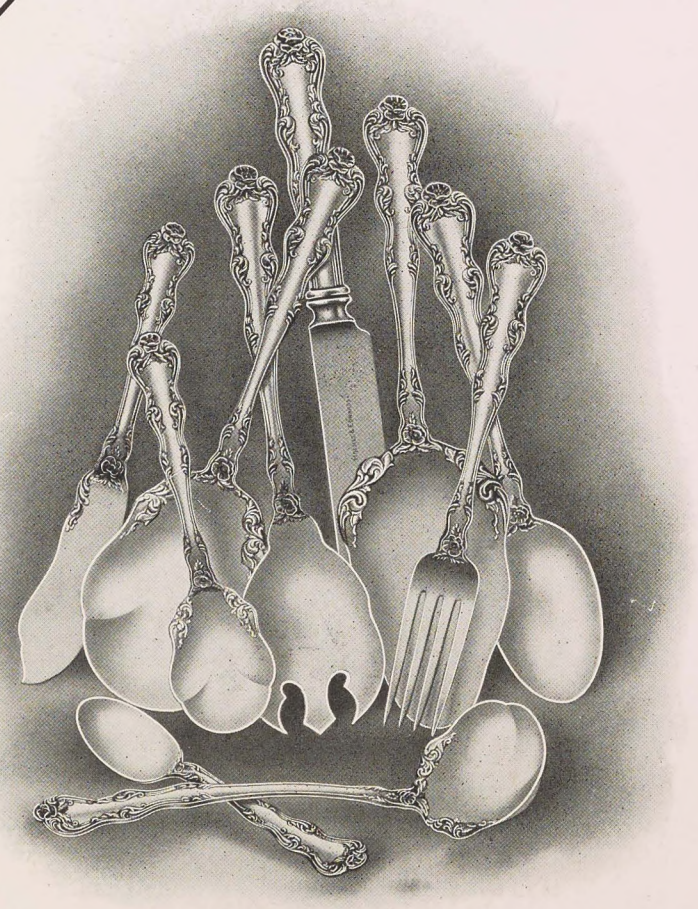
HOLMES & EDWARDS

and nothing in silver plate now on the market can show the careful attention to the details of making as illustrated in this design. It is furnished in our Rolled Plate quality, guaranteed for ten years' wear; Twelve Ounce or Triple Plate, and XIV or Sectional Plate.

SEND FOR PRICES AND DISCOUNTS

TO THE JEWELRY TRADE

IN presenting our two new patterns to the Jewelry trade, we would call especial attention to their great beauty of design. Each in their class is thoroughly artistic, and a fine example of the die cutter's art.



INTERNATIONAL SILVER CO.
SUCCESSOR TO

HOLMES & EDWARDS SILVER CO., BRIDGEPORT CONN.

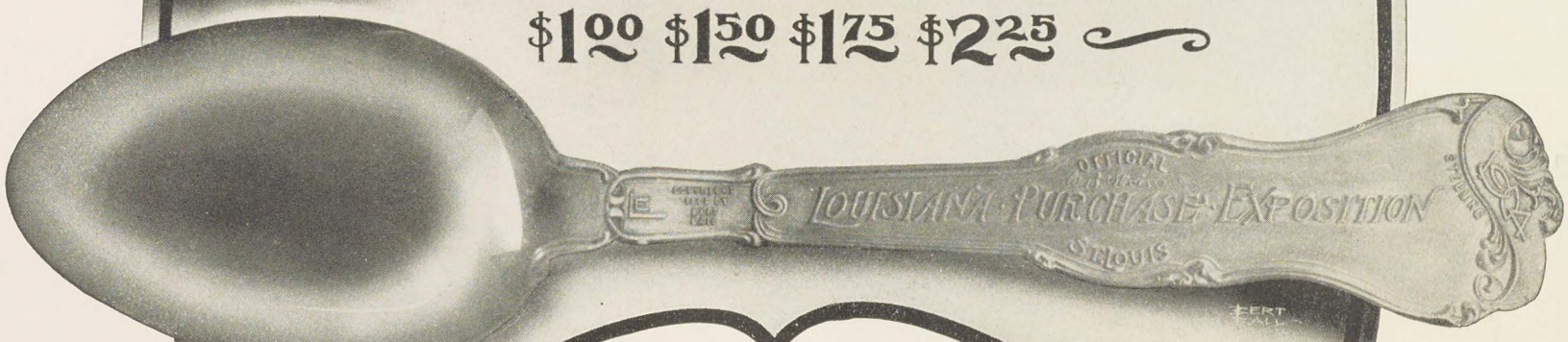
New York—9-11-13 Maiden Lane

Chicago—195 State Street

WORLD'S FAIR OFFICIAL SPOON

FOUR SIZES & WEIGHTS

$1.00 $1.50 $1.75 $2.25



The front of the handle represents

A CENTURY OF PROGRESS

of the

LOUISIANA PURCHASE TERRITORY

In Panorama, Viz: The Setting Sun; The Buffalo and the Indian; The Lewis and Clark Expedition; The Prospectors; The Settlers in Prairie Schooners and the Modern Locomotive.

In the Bowl is shown the Cabildo in which was signed the Treaty ceding the Louisiana Territory by France to the United States.

The opposite side bears the official signature of W. B. Stevens, Secretary of the Louisiana Purchase Exposition, without which no spoon is official.

E TRADE MARK

E TRADE MARK

We have secured the contract from the Louisiana Purchase Exposition Company for the manufacture and sale of this spoon, which will be sold to the public by the RETAIL JEWELRY TRADE only. The figures quoted above are the prices at retail. A suitable discount will be allowed to the dealer, which, together with further details, will be disclosed for the asking. The design of this spoon is not local, but historical, and will therefore sell in every section of the world. The spoon itself is pronounced by everyone to be the most finely finished and artistic of any ever gotten out for this purpose.

EISENSTADT MFG. CO., ST. LOUIS.

San Francisco Letter

The magnificent trophy which was won by the St. Bernard Commandery of Chicago, at the Knights Templar Conclave held in our city last month, is the production of one of our leading jewelry establishments, Hammersmith & Field's, of Kearny Street, and it was well worthy of the efforts put forth by the visiting Templars. It consists of a splendid punch bowl, salver, ladle and cups. The set is a triumph of the goldsmith's art in a design true to nature, as shown in our illustration. Every piece of this grand ensemble is of dull red rich copper, with ornamentation of silver. The lining of the great bowl, of the cups, and of the bowl of the ladle is a rich red gold. The big chalice measures seventeen inches from side to side and stands fifteen inches high, while the circular salver is thirty inches in diameter. On the rim of the bowl are two silver Indian heads (which serve as handles), beautifully modeled, with four bear heads and pelts attached, all in solid silver; between the bears are also two silver coats of arms; not of the swords, spears and battle axes of the Crusaders, but of a graceful design of the more rude weapons of the red warriors of the West. The base of the bowl is mounted with real arrow heads of flint, jasper, agate, obsidian onyx, all neatly attached to it. The red copper salver is rimmed and mounted in silver arrow heads and other Indian designs; the most unique, as well as artistic features, of this part of the set are the two handles of buckhorn on the edge of the metal plate. The horn is in its natural state and bound on with silver thongs. The ladle is of sterling silver, its bowl being hammered in gilt, and the handle is a rare piece of stag horn. The whole outfit is one that reflects great credit upon the house that designed and executed the magnificent trophy that so ably symbolizes the great West.

A Remarkable Trophy of Unique Design

John A. Hammersmith (a Knight Templar), of Hammersmith & Fields, is an energetic worker, and the success of entertaining the host of visiting Knights is partly due to his untiring efforts to provide amusement for the city's guests, as he is responsible for the Chinese play which is present during the entire week at the Grand Opera House in conjunction with the sports at the Sutro Baths, and which was a revelation to some of the visitors from our Middle West States.

Percy Greer and his bride have returned from their six-weeks' honeymoon, visiting points of interest in the East. Percy is loud in praising the merits of the fair at St. Louis.

Ed. Evatt, who recently moved from Geary Street to his new location on Third Street, reports business as very good. His only regret is that he did not open his new store originally in his present location. Better late than never, however.

J. W. Field, formerly connected with the jewelry trade in Boston, Mass., has moved his family and household effects to town and will settle here. Radke & Co., the Sutter Street retailers, have been fortunate in getting Mr. Field's services, as he is thoroughly posted on all lines relative to retailing in a first-class store.

James Montgomery, of Montgomery Bros., of South Spring Street, Los Angeles, Cal., has been East in search of novelties for the fall season. This annual pilgrimage is a very profitable one, as it enables Mr. Montgomery to procure the latest effects in bric-a-brac, art novelties and jewelry.

H. L. Frederick, the retail jeweler, of Santa Barbara, Cal., was among the visiting tradesmen in town during conclave week replenishing his stock for the fall season.

Peter Johnson, of Angels Camp, was among the visiting Knights during the conclave, and he was personally responsible for the success of Pacific Commandery No. 3's exhibits in the large ball room of the Lick House, where he had an elaborate display of gold quartz from his section of California.

G. Reber was in town with the host of visitors. Master Reber accompanied his father to view the decorations and night illuminations. Mr. Reber reports the outlook for future business in Angels Camp as very prosperous, some very fine strikes having been made recently in this gold producing section of our State.

J. J. Hoin, the retail jeweler, of Antioch, Cal., was in town buying a complete new stock to carry him over the holidays.

F. C. Ewert, of Woodland, was among the army of visitors during the Knights Templar conclave. Mrs. Ewert and her daughter accompanied him and were greatly impressed with the imposing appearance of our city during the parade, with its thousands in line and an outpouring of at least a quarter of a million sightseers.

Bert Anderson, who is one of the Anderson Bros., of Auburn and Sacramento, combined business with his Masonic pleasures during the gathering of plumed Knights, and renewed old friendships among friends in the trade.

Emil Steinman and family, of Sacramento, was among the thousands who marveled at the electric display along the blazed trail on Market Street during the week of the big show.

Al. Cantor, the advance agent of prosperity with Nordman Bros., has joined the benedicts. The fortunate young lady, Miss Nellie Wright, is a native of San Francisco, and the young couple are receiving the congratulations of their many friends in the trade. The ceremony took place on August 24th, which accounts for Al.'s advance cards not reaching you when they should.

Harry Jacoby, who conducts a retail store in Oroville, Cal., was among the sightseers, and also bought some desirable ready sellers to replenish his stock for his expected fall business.

A. Eisenberg, Jr., of A. Eisenberg & Co., is still recuperating at Harbor Springs, and we feel as though his long absence from business will be beneficial in the end, although his presence is very much missed by the entire working force in his concern during this busy season.

Chas. Niner, of Pleasanton, was among the visiting tradesmen in town during conclave week, on a pleasure trip, and incidentally marveled at the grand electrical display on our principal street.

Mr. Eppstein, buyer for Frank Golden's jewelry store in Carson City, Nev., was among the visiting tradesmen in town last month buying stock for his fall trade.

Mrs. Sherman Thompson, wife of a leading retail jeweler, of Salem, Ore., spent a delightful vacation visiting points of interest in and around San Francisco during the visit of the Sir Knights.

D. T. Badgley, who formerly conducted a jewelry store in Anderson, has opened a new establishment in Livermore, Cal., and found it necessary to visit this jewelry center to purchase stock for same.

S. F. Hollander, of Eureka, Cal., was among the visiting Sir Knights in town during the conclave on pleasure bent.

M. W. Argall, the Grass Valley retail jeweler, was among the army of visitors during the white light display, and called upon his friends in the wholesale districts.

A. A. Ritter, formerly of 237 Kearny Street, has moved into his new quarters at 524 Kearny Street, where he will have more than twice the floor space previously used in his old store. This move was necessary on account of growing business.

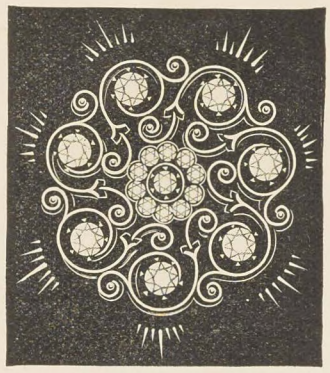
Peter Engle, of Marysville, Cal., was noticed among the ranks of the marching hosts of Knights Templar on parade day.

Hanak & Lasky have moved into their new store at 237 Kearny Street, and have fitted it up in keeping with the rest of the stores in this neighborhood.

Geo. Kryhl, of C. P. Kryhl & Son, retail jewelers, of Santa Ana, was among the visiting tradesmen in town during the conclave on a pleasure trip.

Henry Bohm, of the enterprising firm of retail jewelers, Bohm-Bristol Co., with establishments in Denver, Colo., and San Francisco, was among the visitors to the conclave. Mr. Bohm is an enthusiastic Templar, and has been a member of Colorado Commandery No. 1 of Denver for more than fifteen years and is content to serve in the ranks.

(*Continued on page* 1581)



No. 26C $324.00
No. 27B 360.00
18 fine diamonds
Weight, 1¾ carats
Subject to Catalogue Discount

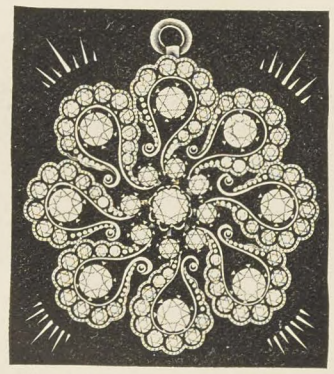
WE GIVE YOU

The Best Value in Diamonds
The Lowest Prices on Diamonds
The Largest Assortment of

No. 90C $82.00
1 fine diamond, $\frac{3}{16}$ carat.
90 fine pearls.
14 K. brooch and pendant.
Subject to Catalogue Discount

DIAMONDS (LOOSE OR MOUNTED)

AND SAVE YOU
MONEY ON
EVERY PURCHASE



No. 25B $1350.00
89 fine diamonds.
Weight, 5⅛ carats.
Solid platinum and gold.
Extra fine piece.
Subject to Catalogue Discount

AND SAVE YOU
MONEY ON
EVERY PURCHASE

You can meet and undersell competition with our goods, because we give you the most and best for the money.

Our New 1905 Catalogue is Now Ready

If you are a regular jeweler and have not received it, please inform us and we will cheerfully send you one free of charge.

No. 419 . . . . . $30.00
1 fine diamond.
Engraved rose color finish.
2 pictures.
Subject to Catalogue Discount

Otto Young & Co.

Wholesale Jewelers

CHICAGO, ILL.

149=153 State Street

No. 425 . . . . . $22.00
1 fine diamond.
Green and rose finish.
2 pictures.
Subject to Catalogue Discount

Cincinnati Letter

Business Improving

Traveling men report an increased business from all sections of the Central States. While the increase is not phenomenal, yet, considering the fact that this is Presidential year and that the business is of a better class, it indicates that the winter season will be a prosperous one. From the farming sections, which seemed to be threatened for a time with disaster, because of lack of rains, come the reports that healthy rains have fallen and that the crops will be bountiful. With this condition obtaining in the rural sections, confidence in the national policy undisturbed, and business in general being good, there is no reason why a big winter trade should not materialize.

Harry Bohmer, with Frohman & Co., accompanied by his family, spent several weeks at Benton Harbor, Mich.

John Schmid, an old-time jeweler, who retired from business a number of years ago, after having made a small fortune, has decided to again embark in the business, and is now looking for a suitable location.

Charles Keller, of Frankfort, Ky., was here several days, ordering his winter stock.

C. S. Bennett, bookkeeper for Frank Herschede, spent a two weeks' vacation on the lakes last month.

Salesmen, representing the Miller Bros. Jewelry Company, who have completed trips through a dozen States, report good crops and favorable indications for a heavy winter business.

S. & H. Gilsey, the Pearl Street jobbers, have added a cut glass department to their business.

William Diehl, a jeweler at Anderson, Ind., was a new buyer in the Cincinnati market.

Joseph T. Cantor, of the wholesale jewelry firm of Lehr, Cantor & Co., against which several creditors recently brought bankruptcy proceedings, filed an answer in the United States Court, admitting all of the allegations in the petition filed against the firm, and he asks that the latter be adjudged a bankrupt. This is the case where Ira H. Lehr, the partner of Cantor, left under unexplainable circumstances, and has not been heard from since. Schedules of the assets and liabilities of the firm were filed in the Court. The former consists of stock in trade valued at $500; debts due on open accounts, amounting to $82.04, and $2 in cash. The liabilities aggregate $6,677.26. Cantor's individual indebtedness is given at $120. He has no personal assets.

C. G. Schlenker and wife, of Hickman, Ky., recently passed through the city on their way home from the World's Fair and the place of their nativity, near Eaton, Ohio.

E. J. Morris, with the firm of Loring Andrews & Co., has returned from a pleasant trip through the East.

Miss Dora Ochs, one of the well-known lady employés of A. & J. Plaut, was married to L. S. Lehrman, also of this city, early in the month of September. The wedding trip of the happy couple included the World's Fair and other points of interest in the West.

J. L. Whistler, jeweler, of Marion, Ind., was in the city several days, buying fixtures for a new store which he is fitting up.

Launch Built by Watchmakers

No arrival for a long time has aroused as much interest in river circles as the new launch, the only one of its kind on the Ohio River, which anchored at the foot of Vine Street early in September. Although the craft is intended for service on the Ohio and Mississippi streams, it is built for lake and coastwise and ocean service. The boat is named the "Cincy," having been built by two Cincinnati boys who are novices in the shipbuilding line. The owners are J. M. Benjamin and Frank C. Menke. The boat was constructed in Jersey City, N. J., and taken to New York City harbor and vicinity, where, for three months or more, it plied the waters in that vicinity. The work of building the boat began last October. On August 18th last it was hauled on a railroad to Pittsburg, and two weeks later it was started on a cruise for the Fair at St. Louis, arriving at this point in less than four days. It will be returned to this city to enter in the excursion service. While here the Menke boys tendered a party of friends an excursion on their boat. The craft is 38 feet long and 10 feet wide, and will accommodate about 40 persons. It has a twin-screw propeller, operated by means of gasoline. The maximum speed is 12 miles an hour, and it will keep up an average speed of 10 miles an hour. It is the intention to fit it up with a kitchen and dining-room and bunks that will accommodate a dozen persons, enabling a party of that number to go on a long voyage. The builders of the boat are watchmakers by trade, and left here several years ago to take up their work in the East. Not a mishap has occurred since it was put into commission.

Burglars recently broke a large plate-glass window in the jewelry store of A. Wahl, 1118 West Eighth Street. They were frightened away before they secured any valuables.

Hugo Lindenburg, of Lindenburg & Fox, has completed a business trip through Kentucky and Tennessee.

Theodore Neuhaus, of the local manufacturing firm, has been appointed a judge of awards in the gold and silver jewelry department at the St. Louis Fair.

S. N. Jenkins is refitting his store at New Richmond, Ohio, and was here several days, purchasing new fixtures and fall stock.

C. A. Gebhardt, connected with the firm of Albert Bros., was ill for some time, with malaria fever, but is reported recovered.

Joseph Hellebush, son of Clemens Hellebush, and for a number of years associated with the business of his father on Fourth Street, died at the home of his parents, at 1603 Ruth Street, some weeks ago, of a complication of diseases, following an attack of paralysis of four years' standing. During his brief business career the young man became very well known among the trade.

Leo Loeb, of Herman & Loeb, was in the East several weeks, looking after some big purchases for the firm.

Ed. M. Klein, of Muncie, and C. C. Ackerman, of Connersville, were among the Northern Indiana buyers who visited the local trade during the month of September.

Traveler's Trunk Disappears

Thoma Bros., dealers in jewelers' supplies, at 419 Vine Street, were notified by wire that Fred Thoma, one of the firm, had been robbed at Fremont, Ohio, of his trunk, containing $6000 worth of jewelry samples, on September 8th. Upon his arrival at Fremont Fred Thoma ordered his trunk sent to his hotel. After waiting for an hour for the trunk he hurried to the depot, and learned that a man, other than the expressman that he had ordered to haul his trunk, had called at the depot station for it. Depot attaches recall that a strange man, with a wagon, backed up to the depot platform, and taking the trunk on his wagon hastily drove off. The depot employés said the man seemed excited as he drove away. All trace of him has been lost. The police of this city were notified, and a search from this end of the line has been started. The belief is that Thoma was followed by some thief, who bided his time until just such an opportunity as occurred presented itself.

Louis Goerner, former bartender, who won a $7500 lottery prize a year ago, was sued by Jeweler George Simper for $275, for a diamond stud. Simper told the Squire that Goerner had lost one stud and got a duplicate in order that his relatives might not discover his loss. He claims Goerner agreed to turn over certain stocks as security, but failed to do so.

Bankruptcy Referee H. H. Haines has called a halt on proceedings by which the estate of W. F. Eyles, bankrupt, was being settled, in a way the referee holds contrary to law. Eyles was in the jewelry business in Dayton. Before going into bankruptcy he made an assignment to Wm. H. Young. The assets were appraised as worth $3388, but the referee reports that Eyles and Young arranged to buy them in for $1200. That amount was bid by Mrs. Eyles. The referee says the transaction was completed by the assignee giving Mrs. Eyles a check of the firm of Young & Young, as assignee, and received the goods. The referee declares the amount grossly inadequate and insists there is no valid sale. The return of the property is demanded. Assignee Young says he acted in accordance with the orders of the State Court. The case has been submitted to Judge Thompson in the United States Court.

Mrs. Stanley Match, wife of a Cleveland jeweler, was, until recently, the guest of her mother and relatives in Covington, Ky.

The jewelry store of Isaac Schwartz, at 29 East Sixth Street, was damaged to the extent of several hundred dollars by water and smoke, a short time ago, during a fire at the Bristol Hotel, in which building the store is located. The fire originated among electric wires at an early hour in the morning, and caused something of a panic among the guests. No one was injured, and the damage to the various business enterprises was covered by insurance.

The Herschede Hall Clock Company, which has had an elegant exhibit of half clocks at the World's Fair, has been awarded the first gold medal upon the clocks and the first silver medal upon its symphony tubes. The honor is a merited one.

E. Bixby, of Ironton, Ohio, made a flying trip to the city to secure some needed stock.

Two employés of A. & J. Plaut were made extremely happy a short time ago by the arrival of a young heir. The addition was made to the family of H. I. Jacobson. A. C. Tepfert, father-in-law of Jacobson, and also connected with the firm, was more elated, if possible, at becoming a "grandpa" than Tepfert was at becoming a "papa."

Wm. Pflueger is making a trip up the Ohio River in the interest of Jos. Noterman & Co.

Herman Keck was recently a visitor at Saratoga, New York.

The jewelry firm of Frauken & Levites, who have been doing business at 725 Central Avenue for a number of years, has been dissolved, Levites continuing to carry on the business individually.

Edward H. Simper, jeweler, at 707 Vine Street, is home from a pleasant trip on the lakes.

Mr. and Mrs. Fred Willets, the former connected with E. & J. Swigart, are rejoicing over the arrival of a bouncing boy at their home.

Gus Frank, of Herman & Loeb, and Miss Lilian Rexinger, both of this city, were married September 7th, and left on an Eastern wedding trip, which included Atlantic City and other watering resorts.

Jacob Dorst, senior member of Dorst & Co., is making a trip through Western cities in the interest of the new branch house which was recently established at Kansas City.

Chas. F. Kline, a jeweler of San Antonio, Tex., recently stopped off in the city on his way home from the East. He left several nice orders before departing.

Vicor A. Gebhardt and wife recently returned home from an extended and very pleasant automobile trip through Michigan and Ohio. The Gebhardt Bros. have built up a very lucrative manufacturing business in the past few years.

C. J. F. Bene, the retired jeweler, who formerly was a senior member of the firm of Bene, Lindenberg & Co., has returned from a summer tour through Europe.

Among the jewelers who visited the trade during the past month were: Ohio—S. N. Jenkins, New Richmond; P. W. Starks, Manchester; A. Wahlrab, Dayton; A. Lehne, Mechanicsburg; E. D. Grandmason, Kenton; H. C. Reed, Blanchester; H. H. Eveslage, Ripley; E. Bixby, Ironton; Frank B. Carey, Lebanon; Dr. H. W. Bryant, Troy; G. H. Hansgen, Bethel; Joseph Meyer, Harrison; J. H. Drake, Lebanon. Kentucky—C. G. Schleuker, Hickman; J. Warren, of Warren & Warren, Paducah; J. H. Bovard, Newcastle; J. W. Burk, Carrollton; H. A. Rohs, Cynthiana; J. E. Robertson, Brookville; Charles Keller, Frankfort; Frank Fullilore, Owenton. Indiana—J. L. Whisler, Marion; C. C. Ackerman, Connersville; William Diehl, Anderson; Ed. M. Klein, Muncie; Ralph Timmerman, Batesville; C. F. Kline, San Antonio, Tex.

A FEAST FOR FALL BUYERS

We invite the attention of all Jewelers to our magnificent new fall stocks in

WATCHES
DIAMONDS
JEWELRY
SILVERWARE

Everything the Jeweler needs for fall and holiday trade

We handle only reliable goods—such as will help your business and safeguard your reputation.

Our central location means easy access, prompt service, economy in freight charges, satisfaction in everything

GEO. B. BARRETT CO.,
WHOLESALE JEWELERS AND DIAMOND IMPORTERS

347 FIFTH AVENUE
PITTSBURG, PA.

R. B. MACDONALD & Co.
MANUFACTURING JEWELERS

Bigney Building, ATTLEBORO, MASS.

336/3

Our Specialty
CURVED JOINT
LOCKETS
Pat. Feb. 10, 1903
ALSO
Silver Novelties
IN

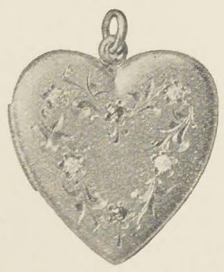
Manicure Sets	Match Boxes
Desk Sets	Book Marks
Tooth Brushes	Hat Marks
Paper Cutters	Garters
Hooks, Files	Etc., Etc.

SPECIAL VALUES

ASK YOUR JOBBER FOR THESE GOODS

298/3

334/3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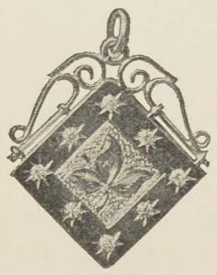
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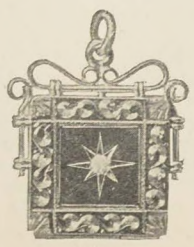
The Little Beatrice Locket

286/2

Trade-Mark

289/2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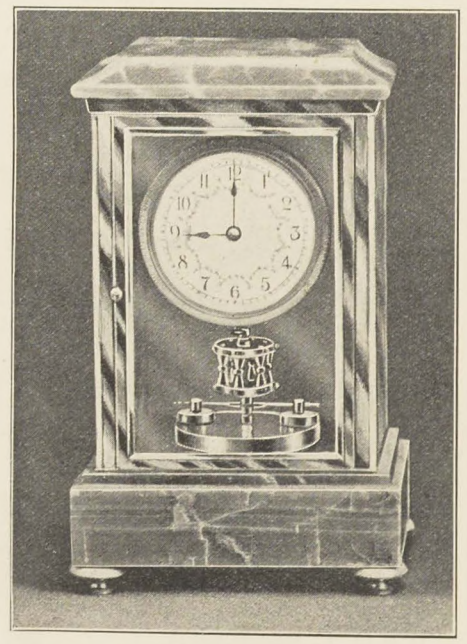
Anniversary Clocks Trade-Mark Registered

Our Crystal and other fancy cases for the Anniversary Clocks (eighteen patterns) are all made for us by the best clock case makers in Paris—the Metal work is *heavily gilded* and will not tarnish as does some of the cheaper cases made in other countries. Send for catalogue with revised prices, and order your Anniversary Clocks now for the Holidays while the stock is complete.

Mantel Regulator No. 1
Mexican Onyx and Gilded Bronze Case



Price, $30.00 Net Cash
Height, 12¼ in. Width, 7½ in. Porcelain Dial, 4 in.

The Bowler & Burdick Co.
Sole Agents for the Anniversary Clock

CLEVELAND, OHIO

Pittsburg and Vicinity

Favorable Trade Prospects

Fall trade has started in Pittsburg with more encouraging signs than were apparently hoped for by most of the jewelry trade. This is the consensus of opinion of the leading members of the craft, and is borne out by the fact that after the extreme dullness of the summer, which seemed to reach the climax during the past month of September, a buying movement has started among the great mass of people and promises to continue. September closed with a number of notable weddings, all of which spread their influence over the trade, and in a material way added to receipts. This coming month of October has several equally as notable events in local society, which will help the good cause along, and perhaps it is interesting to note that no less than three Pittsburg belles are preparing for nuptials in which the grooms are foreign noblemen. In such cases the demand for wedding gifts is not confined to a few by any means, particularly in the case of these three, owing to the general popularity of the Pittsburg young people who are involved.

Wholesalers Report Improvement

Among the wholesalers the report is given that most of the salesman on the road are sending in good order sheets, and most of the houses are busy putting in new stocks for the coming season. Geo. B. Barrett Co. report particularly favorably on this matter, and have an unusually fine lot of goods arriving, not a small portion of which is imported ware, the result of the summer buying. The establishment has the appearance of improved conditions, and business is moving rapidly.

Heeren Brothers & Company have attracted wide attention with one of the finest exhibits of imported bronzes and art goods at the Pittsburg Exposition which is now in progress. The company has a handsome booth in the annual industrial show, and this has been the central point for thousands to view the display for some weeks. The same house has its factory in operation under high pressure, and the officials speak encouragingly of the outlook. Viewed from a basis of past experience, it is called to mind that during the summer of 1903 the business conditions were unusually good when they were rather expected to be quiet. In the fall, when trade was expected to spurt ahead with greater energy, there was a marked falling off in demand. This year the summer has been more quiet than for years past, and for this reason the reversal of the winter trade from last year is confidently predicted, and better demand is looked for and, in fact, has already shown itself.

A New Store

Perhaps one of the more important events of the season has been the formal opening of the Pittsburg store of James McCreery & Company, of New York. This store occupies a twelve-story building in Wood Street, and is one of the most extensive department stores in the State. Of course, there is a jewelry department, and this drew the attention of the trade to this particular newcomer. Inspection of the stock in a casual manner was quite general among the trade, and the pronouncement of the stock as one of the highest grade in the city, and at prices that will in no way interfere with the legitimate trade, has satisfied the dealers generally that they will not have another disputant to their own share of business thrust upon them this season. The store is superbly equipped, and the jewelry department on the ground floor has many fine fixtures, with novel devices for display that are new in this section. The stock is the usual run carried in department stores, but of a high order and entirely free from "bargain-counter" material.

Displays of New Goods

Window decorations for the fall are bristling with novelties and new stock. Dealers call attention to the fact that the Toplitz ware is very popular. The stocks of this class of goods are quite large. There is some complaint of the slow arrival of cut glass stock. The local demand for cut glass this season has been phenomenal, and the orders have been so heavy that the manufacturers have been unable thus far to get their factories up to the required shipping point to meet the demands. Such stocks and designs as have come out this fall, however, have been freely displayed, are attractive and appeal strongly to the buyers.

Gillespie Brothers are filling their handsome showrooms in the Park Building with new goods, some of which are from Europe and were secured during the summer.

L. W. Vilsack & Co., in the Farmers' Bank Building, have continued their handsome window displays that hold the attention of thousands in that section of Fifth Avenue, and the house is catching a good share of the trade. Some of the more generous buyers among Pittsburg's wealthier class have only just returned from the summer outings and summer homes in the mountains and seashore, and for this reason have been a little slow in making their appearance in the stores of their favorite dealers, but these are looked for at any time now with the many weddings approaching.

St. Louis Exposition

It is interesting to hear the discussion on the exhibits at St. Louis, which local dealers spent some time in looking over. The foreign manufacturers carried off the honors in local opinion, showing that American producers of art goods have a considerable distance to cover before reaching that degree of perfection that will warrant them in competing seriously with the old-world people. The one great surprise expressed is at the poor showing made by the American cut glass men, whose product is superior to the foreigners. So few had any exhibit at all, and those that did seemed to be so small in extent and design as to give the impression that they were too busy to give the great exposition the attention that it deserved.

During the past month the stocks of a few of the small traders, particularly those confined to the cheap grade of goods, have been sold by auction sale. The character of the goods handled has been such as to make the effect unnoticeable among the trade, but the high rents that have been growing more depressing to the spirits of all classes, have had the effect of closing some of these cheap goods stores permanently. Diamond's optical store, at Sixth Street and Penn Avenue, which had a large floor space at the opening of the season, has been curtailed by the sub-leasing of the rear portion of the store to a haberdashery, which has an independent entrance in Penn Avenue. Other dealers who have been able to curtail and economize to meet the high rentals are doing so readily enough, and will not apparently suffer in trade by this move.

Great Industrial Activity

General business conditions in this district, which shrewd jewelers always scan with close attention to detail, have been summed up as more favorable than a year ago. While it is true that the business depression is still in evidence, it is being dissipated with the resumption of operations at all of the great iron and steel mills and among the furnaces, giving employment to hundreds of thousands of men. The earning power of the people has been lessened from the high percentage of the past two years, but the costs of living have been gradually settling to the new era. The element of conservatism that is prevalent is regarded as one of the most promising features for the winter trade, because the general revival that is elsewhere indicated, is given a permanency that is strengthening confidence and encouraging investments. Bankers report easier money, and while the movement toward a more active life in all commercial circles is slow, it is sure and steady. The Pittsburg stock market has been recovering from a stagnant condition, and prices have risen steadily on all standard securities, particularly industrial stocks, which would be the first to reflect in this section the feeling of the general public.

San Francisco Letter

(*Continued from page* 1577)

C. W. Ernsting, the retail jeweler, of San Diego, spent a very profitable week during the conclave. Mr. Ernsting had charge of a display of the new California mineral "Kunzite" at the San Diego exhibit in the Mechanics' Pavilion, and always had a willing audience at his command, as his exhibit consisted of some magnificent specimens of valuable jewels found in his section of our rich State.

Chas. J. Noack, one of the leading retailers of Sacramento, was one of the marching host during the Knights Templar parade.

M. Saier, of Fresno, paid this city a visit recently and called upon his friends in the trade. He incidently laid in a nice line of ready sellers for his fall business.

A. Isaacs, the retail jeweler, of Kearny Street, this city, is on a sightseeing tour of Eastern points of interest. Mr. Isaacs' family accompany him and they will be away at least three months.

C. C. Weindieck, the Red Bluff retailer, attended the conclave of Templars and called upon his friends in the trade while in town.

The jewelry store of Fred. H. Van Norden, The Dalles, Ore., was robbed of eighteen watches, one tray of lockets and a tray of brooches on the evening of September 8th. A stone was thrown through the window and the goods were then grabbed up. There were three men implicated in the robbery, and up to this writing none of them has been apprehended.

What Becomes of the Pearl Buttons

"America destroys annually 17,500,000 gross of pearl buttons," said J. F. Robinson, of Omaha, Nebr., who is engaged in the manufacture of that article of commerce. "There are in the United States about fifty factories that turn out daily 1000 gross of buttons at least. I should not be surprised if the average is larger than that, but I am sure the figure is on the inside. What becomes of them is another question. Some people save buttons with the same zeal that a miser saves coins, and so the consumption of seventeen and a half millions a year must arise from the careless classes who lose or throw them away when they come off their garments. The industry is rapidly growing, and the demand for the product is such that all the manufacturers are kept busy with their orders.

MAIL ORDERS SOLICITED FOR ANYTHING IN THE JOBBING JEWELRY LINE

NOTE THIS BARGAIN

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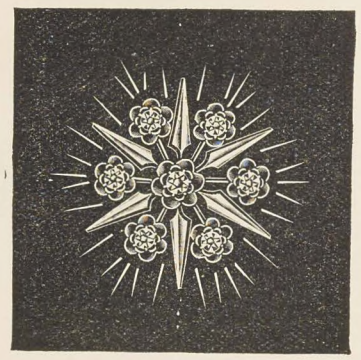

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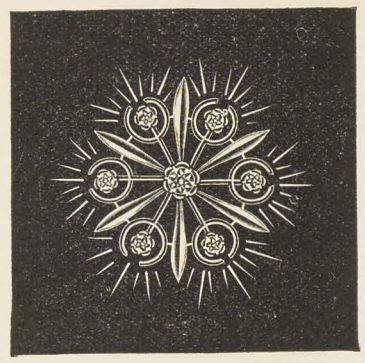

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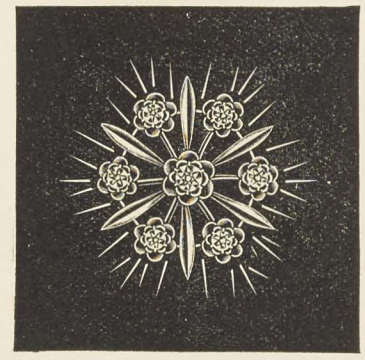

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COMMERCIAL BUILDING ST. LOUIS

MEDALS
AT
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SPECIAL DESIGNS
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ON NEW WORK
OF ALL KINDS
FURNISHED
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SHORT NOTICE

"OUR WORK"

IS OUR BEST RECOMMENDATION

An ordinary soft-solder job merits our careful attention as well as the finest diamond work. If your work has been coming back to you in a slip-shod, don't-care sort of way, SEND IT TO US.

WE WILL DO IT THE ONLY WAY:
"RIGHT"

BAUMAN-FREY MFG. CO.

COMMERCIAL BLDG. ST. LOUIS, MO.

A COMPLETE LINE
OF
MOUNTINGS
IN
RINGS
STUDS
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ETC., ETC.

CONSTANTLY ON
HAND IN ALL
SIZES, STYLES
AND PRICES

TRY US

St. Louis Letter

Attendance at the Fair Immensely Increased

We are glad to note that all through the month of September the attendance at the World's Fair assumed large proportions, and that visitors have been flocking here from all corners of the world. It is pleasant to know that at last it has dawned upon our countrymen, North, South, East and West, that this is the greatest Exposition that was ever produced, and the present generation will surely not have an opportunity again to see one of such immensity and magnificence. St. Louis is amply prepared to take care of all visitors, charges for good accommodations are extremely moderate, and no extortion is tolerated. The weather is delightful. Besides, the Louisiana Purchase Exposition is the greatest national enterprise and a fitting and worthy commemoration of one of the greatest political events in the history of our country. The following table shows the attendance at the Fair up to the middle of September. The week ending with the 15th was the first one in the history of the Fair that showed an attendance for the six days exceeding 1,000,000. The record admissions for the week were as follows:

Monday	112,432	Friday	131,111
Tuesday	110,616	Saturday	134,607
Wednesday	134,642		
Thursday	404,450	Total	1,027,918

Recapitulation:

April, one day	187,795	August, 27 days	3,088,743
May, 26 days	1,001,291	Sept. 15 days	2,276,208
June, 26 days	2,124,836		
July, 27 days	2,343,557	Total	11,022,430

Chicago Day at the Fair

On behalf of the City of St. Louis and the World's Fair Management, Mayor Rolla Wells and a committee of the Exposition officials called on Mayor Harrison, of Chicago, and presented a formal invitation to the city he represents to visit the World's Fair city and participate in the observance of Chicago Day, October 8th. Mayor Harrison promised the committee to do all in his power to make the day a success.

Come to the Fair

We take it for granted that the great majority of those who read this department of THE KEYSTONE have attended or propose to attend the St. Louis World's Fair, the greatest yet of all Expositions of the world's material progress in the arts, sciences and the industries of life ever yet attempted by man. On the 1st of September our big show entered upon the fifth month of its existence, and is now in the flood tide of its glory. It can be seen to the very best advantage in October and November, but those who want to see this marvelous Exposition should not linger too long in coming to it. October in this region is usually fine and enjoyable for outdoor exercises, and the attendance is expected to reach the 5,000,000 mark for the month. Anything like this number of visitors will make October the banner month of the Fair. We advise all our friends who wish to see the Louisiana Purchase Exposition at its best to lose no time in getting there.

A Memorable Day at the World's Fair

St. Louis Day at the World's Fair was observed September 15th. It has proved a memorable day and was a magnificent success. The jewelry and optical trades observed the day as a general holiday, and all wholesale and retail houses were closed to business. Not only did most of the concerns give their employés a holiday, but quite a number gave them tickets of admission. Every effort was put forth by the Exposition Management and the citizens of the World's Fair city to make it the biggest in the history of the Fair. As a result the attendance was over 405,000, which is double that of any other single day since the opening. This is a most creditable showing, most fitting and gratifying to the great central city of America.

Mrs. E. A. Maxwell, wife of Jeweler Maxwell, of Albion Ill., spent several days in St. Louis last month, enjoying life in the World's Fair city while looking over the Louisiana Purchase Exposition.

M. E. Sawyer, of Hamburg, Ark., spent a few days with us last month, combining some buying with an examination of our wonderful World's Fair.

H. W. Wood, of Colfax, Iowa, was among the throng of jewelers who were here last month doing the World's Fair. Mr. Wood was well pleased with our big show.

C. H. Noyes of Paris, Tex., was among the many representatives of the Lone Star State who spent time here last month viewing our wonderful Exposition as well as doing some of his fall buying.

Goodman & Snuffer, of Memphis, Tenn., were represented in this market last month by Mr. Goodman, the head of the firm, who was here doing some buying and enjoying a few days looking over the delights and wonders of our World's Fair.

Jeweler J. H. Smythe, of Fort Smith, Ark., accompanied by his family, was doing the Fair for a week last month and enjoying it greatly.

F. W. Sellers, the well-known jeweler of Wellington, Kans., was here for several days last month, doing the Fair.

P. P. Neill, of Clarendon, Ark., was in the city for a few days last month, combining his fall buying with an examination of our World's Fair.

M. L. Truby, the well-known jeweler of Independence, Kans., spent a week in the World's Fair city last month, looking over the Louisiana Purchase Exposition and doing some of his fall buying.

William Welch, of Demopolis, Ala., was a welcome visitor in this market last month. Mr. Welch was spending a few days here doing the big show at Forest Park as well as looking after his fall buying.

Charles Mosby, of Batesville, Ark., was a visiting buyer in this market for some days last month. Mr. Mosby spent a greater part of his time while in town enjoying the sights at the World's Fair.

W. E. Fenstermacher, of Beloit, Kans., spent a week in town last month, visiting our World's Fair, to his delight and pleasure.

F. D. Taylor, of Hobart, Okla., spent some days in St. Louis last month, selecting his fall bills and viewing the sights at the World's Fair.

Jeweler Ralph Wickliffe, of Arkansas City, Kans., and Mrs. Wickliffe, spent a week in St. Louis last month, enjoying the sights and wonders at the World's Fair.

Ernest Leben, of Jennings, La., was among the many Southern jewelers who spent some little time here last month, viewing the World's Fair and doing some buying for their fall trade.

A. L. Boneswell, of Gibsonburg, Ohio, enjoyed the delights of life in the World's Fair city for a few days last month while he investigated our wonderful Exposition.

Alfred M. Ward, of Abilene, Kans., accompanied by Mrs. Ward, spent a week in St. Louis last month, taking in the Fair.

The Cook Jewelry Company of Fayetteville, Ark., were represented in this market last month by J. M. Cook, who was here doing some buying and looking over the World's Fair.

C. R. McCulloch, of Point Pleasant, W. Va., was here for several days last month, taking in our World's Fair to his pleasure and profit.

The T. K. Smith Jewelry House, of Oskaloosa, Iowa, was represented in this market last month by L. E. Smith, the head of the house, who was here for a week, enjoying the delights of the Fair as well as doing some fall buying.

Reid Lawson, with the Calhoun Jewelry Company, of Birmingham, Ala., spent a number of days in St. Louis last month, looking over the World's Fair.

Dowell & Wallace, of Walnut Ridge, Ark., were represented in this market by W. A. Dowell, who was here for several days, selecting fall novelties and viewing the sights and wonders at the Louisiana Purchase Exposition.

Fred L. Miller, with Brown & Borsheim, Omaha, Nebr., spent several days in St. Louis last month, taking in the big show at Forest Park.

Edward Vail, the well-known Wichita, Kans., jeweler, and Mrs. Vail, spent a number of days in St. Louis last month, doing the World's Fair.

Joe A. Harris, of Waxahachie, Tex., spent a week in this market last month, looking over the St. Louis World's Fair and doing some buying.

M. T. Graham, of Fort Smith, Ark., was in St. Louis for several days last month, looking over the Fair and doing some buying for the home market.

I. T. Gabbert, of Caldwell, Kans., was among the many jewelers from the Sun Flower State who spent some time here last month, looking over our World's Fair.

J. F. Clark, of Abilene, Tex., was among the throng of Southwestern jewelers who were in this market last month, visiting the World's Fair and looking after their fall buying.

Phil Levy, of Henderson, Ky., was among a number of jewelers who were in St. Louis from the Blue Grass State last month, looking over the World's Fair and doing some fall buying.

T. A. Mauch, of Yazoo City, Miss., spent a week here last month, doing his fall buying and looking over the World's Fair.

R. L. Waggoner, of Mangum, Okla., was in St. Louis for several days last month, viewing the Fair and attending to his fall buying.

Theodore Neuhaus, of Theo. Neuhaus & Co., Cincinnati, was here for a fortnight last month, enjoying life in the World's Fair city while looking over the Louisiana Purchase Exposition. Mr. Neuhaus was a member of the International Jury of Awards passing on the exhibits of jewelry and silverware, and was kept pretty busy during his stay. Mr. Neuhaus said to THE KEYSTONE representative that the Exposition was an artistic success as well as otherwise, but that he believed it would require six months of hard work to see everything that is displayed in the fourteen exhibit palaces, to say nothing of the minor exhibit structures, the forty foreign pavilions, the forty-five State buildings, the groups, fountains, gardens, and the incomparable Pike. Still he had time to see, in his short stay, that which would require a life-time of travel—that which no college or university could give in a hundred years. Mr. Neuhaus was warm in his praise of the foreign exhibits, which he thought far surpassed anything that had been seen at previous expositions.

Jeweler H. G. Petty and wife, of Fort Collins, Colo., spent some days in St. Louis last month, enjoying the delights of the World's Fair season. They were greatly pleased with our big show and regretted they could not stay with us longer.

Mauch & Adams, of Marshall, Mo., were represented in this market last month by

(*Continued on page* 1587)

GOLD FILLED
G.A.M. & Co.
TRADE=MARK

REMEMBER

that our prices are as low as any conservative wholesale dealer could ask to have them, when the quality of our stock is taken into consideration, 1-8, 1-10, 1-15 seamless gold filled. Our woven wire fobs are 1-15, which is more than 150 per cent. better than the 1-40 ones floating on the market. Our elegant new fall styles, embracing all novelties in chains, are ready for jobbers' inspection.

1000 NEW STYLES

METAL FOBS, VIZIER CHAINS, VEST CHAINS, LORGNETTES, NECK CHAINS, CHATELAINE PINS, BRACELETS.

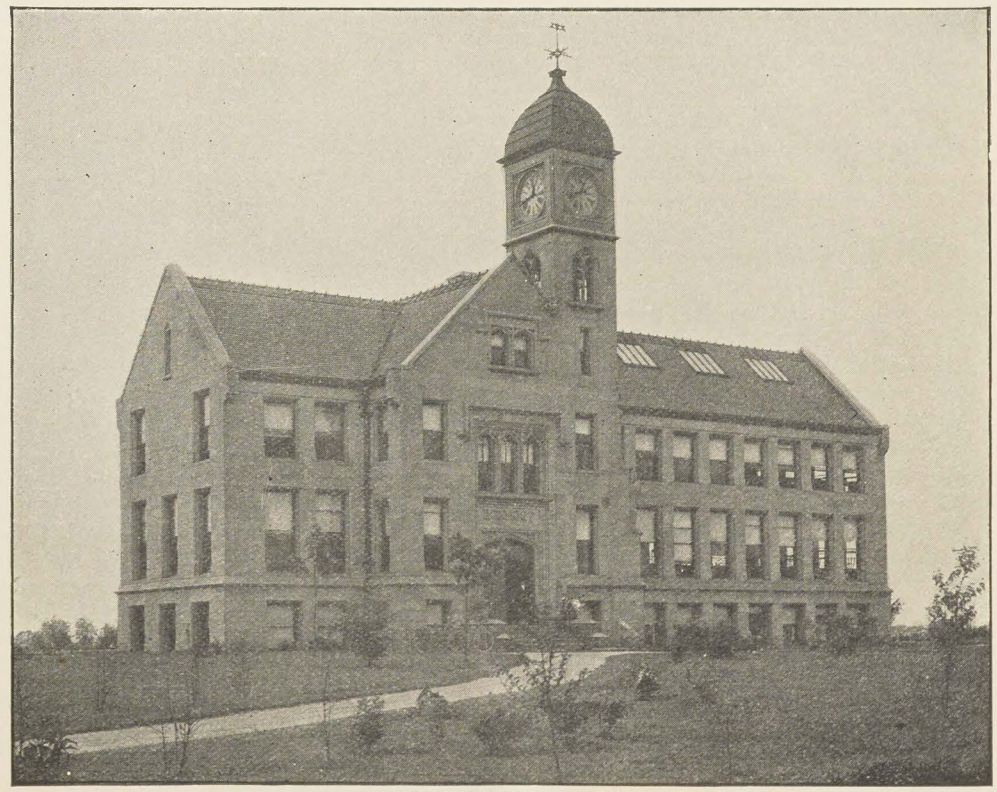
We make goods that will give the consumer satisfaction

C. A. MARSH & CO., ATTLEBORO, MASS.

FOR MANY YEARS

You have been saying to yourself, just as soon as I am able and can spare the time, I am going to take a course in a good Horological School and learn the art of Watch Work, Jewelry Work and Engraving, so that I will be competent to turn out the best work and an ***authority on Horology in my community.*** This year you had to see the Great Fair. Begin 1905 by fulfilling the promise made yourself and start in at the ***Horological Department, Bradley Polytechnic Institute.***

Do not put it off. Send postal card to-day for ***free*** catalogue.



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The Largest Building in the World Devoted Exclusively to a School of this Kind

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Birmingham, Ala., Letter

Business Improving

Business conditions have livened up during the past three weeks in all lines, though the strike of the miners in the Birmingham district has had a bad effect so far as the Birmingham dealers are concerned. The situation is looking better, however, and it is expected that there will be nothing to complain of by the middle of October. In the country districts all is well. Cotton is coming in at a lively rate and is bringing ten cents and over, all of which assures prosperous times. With the good year of the farmers last season, and the high price of the staple, they got relieved of their debt, and this year what they have made is largely surplus. Corn and minor crops are plentiful. The small amount of coal mined by the furnace men has had a tendency to stiffen the price of iron, which helps the industrial districts. Several furnaces which have been idle have begun work, and the big new stack at Battelle has been fired up.

Trade Trickery

Hardwick Ruth, of the firm of C. L. Ruth & Son, Montgomery, tells of the reprehensible methods of trading practiced by at least one St. Louis jeweler. While in the exposition city last month, Mrs. Ruth and a friend saw some combs in a window display in the house of an Olive Street concern, and as the place looked in every way decent, they went in and priced them. Mrs. Ruth having said something about being the wife of a jeweler, a concession price of $3.50 each was made, which was much below the regular price they were informed. Mrs. Ruth bought the comb, and her friend purchased a similar one, with some side combs also, making the bill of the latter $7.50. Walking down the street they overtook the gentlemen and told them of their purchases. Mr. Ruth smiled and said: "I have just priced the same thing at a department store for $1.50, and at a jewelry store, near where you got them, for $2." Mr. Ruth then walked back to the store and asked the man to show him the combs, which he did, making a price of $3.50, then $2.50 although he had told Mrs. Ruth $3.50 was a concession, $5 being the regular price. Mr. Ruth then told him the price was exorbitant and the business methods a disgrace to the calling, and asked if he would not refund a part of the money. This was refused, as well as a request to exchange for goods desired in the stock. Mr. Ruth tells the story simply to show that there are disgraceful practices at St. Louis, and it is to the advantage of the trade to show them up. He says he will be glad to give the name of the offending firm to any who may inquire.

F. W. Bromberg, the well-known Birmingham jeweler, was victimized last week by a slick negro, but fortunately he recovered the goods. The negro, who gave his name as Alla Moore the first time, and Ed. Young the second, bought a diamond ring, a watch and chain, on notes, and by giving the names of men who worked for the railroad for which Bromberg is the watch examiner. Suspicion was aroused and officers were put on the track, who soon had him in jail. The real name of the negro is Ula Davis, though he gives it as John Henry Davis sometimes. His plan was to go around and get the names of reputable negro workmen and trade on them in getting goods by instalment.

George A. Poetz, successor to A. Poetz & Co., Mobile, has been in business in the Gulf City for fifty years, beginning in 1850. They have come up from a small beginning to a modern store with every modern department, including an optical store which has only recently been put in.

C. B. Sargent's jewelry store, at Cullman, was robbed of $200 worth of goods, the entrance being made by a barefoot boy, as the tracks nearby show. Entrance was effected by a transom over the door. Five gold watches, fourteen fine rings, four heavy watch chains and four pearl-handle knives are missing.

Mrs. M. E. Abbott, of Birmingham, died a few days ago. She was the mother of H. C., A. V. and W. C. Abbott, who own the big jewelry store of Abbott Bros., on Second Avenue. She was one of the most highly respected women in Birmingham.

Reich's jewelry store at Columbus, Ga., has put in a line of kodaks.

The firm of Webb Bros., composed of H. Y. and C. A. Webb, Greensboro, has been dissolved, C. A. Webb retires and leaves the conduct of the business to his brother.

Jeweler Adams, of Thomasville, has put in an optical stock.

Omaha and the West

Good Prospects for Fall Trade

In wholesale and jobbing circles there exists the highest anticipation of an extensive fall business. This has for its basis the success of the Nebraska crops and the high prices which have been caused by failures elsewhere. At the present time the farmers are making over a dollar for their wheat. From this crop alone some of the farmers will make small fortunes at a single stroke. In addition they will have a corn crop, which for quantity and quality has never been excelled. In other years, when times were hard and prices low, it was estimated that if the farmer received eighteen cents a bushel for his corn he would make money. With prices now ranging between fifty and sixty cents a bushel, the farmer will doubtless fare extremely well. In Nebraska farms of 640 acres are by no means unusual, and in some instances there are farms of over a thousand acres under cultivation. Many farmers own two or three farms of 360 acres. Therefore, the farmer who this year clears from $5000 to $10,000, or even $12,000, will not be a rarity.

Nebraska Wheat Crop Safe

Wheat suffered somewhat in Nebraska as a result of excessive moisture on the lowlands, but the proportion of loss as compared with some of the other States is trivial. Most of the farmers planted a big wheat acreage, and many will sell several thousand bushels. It is this condition which leads the wholesalers to expect a flourishing business during the autumn, and already trade has begun to pick up in spite of the presidential election, which is the only depressing feature. The reason for this unfavorable effect is difficult to discern, but that it exists is attested by all the jobbers. After election business will come with a rush they say. The Ak-Sar-Ben festivities brought many out-of-town dealers to the city, but while they did some buying they were too much engaged in diverting themselves, as a general rule, to pay much attention to business. They know that the representatives of all the jobbing houses will visit them at their home towns, and therefore they have got into the habit of merely making a rush through the displays in the stores during the festival.

D. R. Wilson, jeweler, has disappeared from Shenandoah, Iowa, where he was in business, and his whereabouts at the present time is not known. It is thought by many that he is in Canada. His shortage is said to be about $25,000, which he obtained by the forgery of notes on pianos and jewelry. He is supposed to have taken $12,000 in cash with him. He owed a small account with the Shook Mfg. Co., of Omaha.

C. Kohn and J. J. Kirschbaum were arrested in Lincoln recently on the charge of stealing diamonds and jewelry. Kohn had in his pockets jewelry to the value of more than $1000. It consisted of a diamond sunburst, a diamond brooch with eleven sets, two diamond-set charms, two garnet rings, four watches, one knife with a diamond in the handle and an opal ring. The police believe the jewelry was stolen in the East, inasmuch as they received no reports of stores having been robbed in this section of the country. Kohn refused to say where he got the jewelry. Kirschbaum refused to say anything about himself except that he had been working with Kohn at Bonesteel, which was recently the scene of the Rosebud drawing, and attracted crooks from all parts of the country.

J. C. Grasborg opened a new jewelry store in South Omaha recently. A formal opening was held. The name of the firm is J. C. Grasborg & Co. Hundreds of people viewed the store on the opening night, and more than 1000 souvenirs were distributed. Mr. Grasborg was formerly in the jewelry business at Schuyler, Nebr.

Complaint has been filed in the police court here against Fred. L. Spalding, who says he is from Pennsylvania, charging him with having robbed the Jacobson jewelry factory, in the Arlington Block, at 1511-12 Dodge Street. The stolen property consisted of gold and jewelry to the amount of about $200. The property was recovered from pawnshops in Omaha and Kansas City, and Spalding was arrested on descriptions obtained from the pawnbrokers he had visited. The thief obtained entrance to the factory rooms by means of a skeleton key. Spalding is about twenty-one years of age and is a new crook to the Omaha police. He has confessed to the robbery.

In the retail business diamonds have been selling very well this summer.

Mawhinney & Ryan have entirely relighted their store, securing a much better effect than formerly. This firm has also added a new press in the stationery department.

The stock of D. R. Wilson, at Shenandoah, Iowa, was purchased by Gauss & Simmonds, and was sold at auction.

E. W. Tilley, of Mount Vernon, Wash., who sold out one year ago with the intention of finding a new location, has returned to Mt. Vernon and is again engaged in the jewelry business.

H. L. Moore, jeweler, of Tekamah, Nebr., was in the city recently.

W. H. Whisman, of Whiting, Iowa, was in the city buying goods.

New pupils who are now taking courses at the Omaha Horological and Optical Institute are: Miss Grace Messler, Gothenburg, Nebr.; R. L. Senift, Osborne, Nebr.; Louis O'Hara, Omaha; Lester P. Hatch, Marietta, Kans.; Peter J. Foy, St. Paul, Nebr.

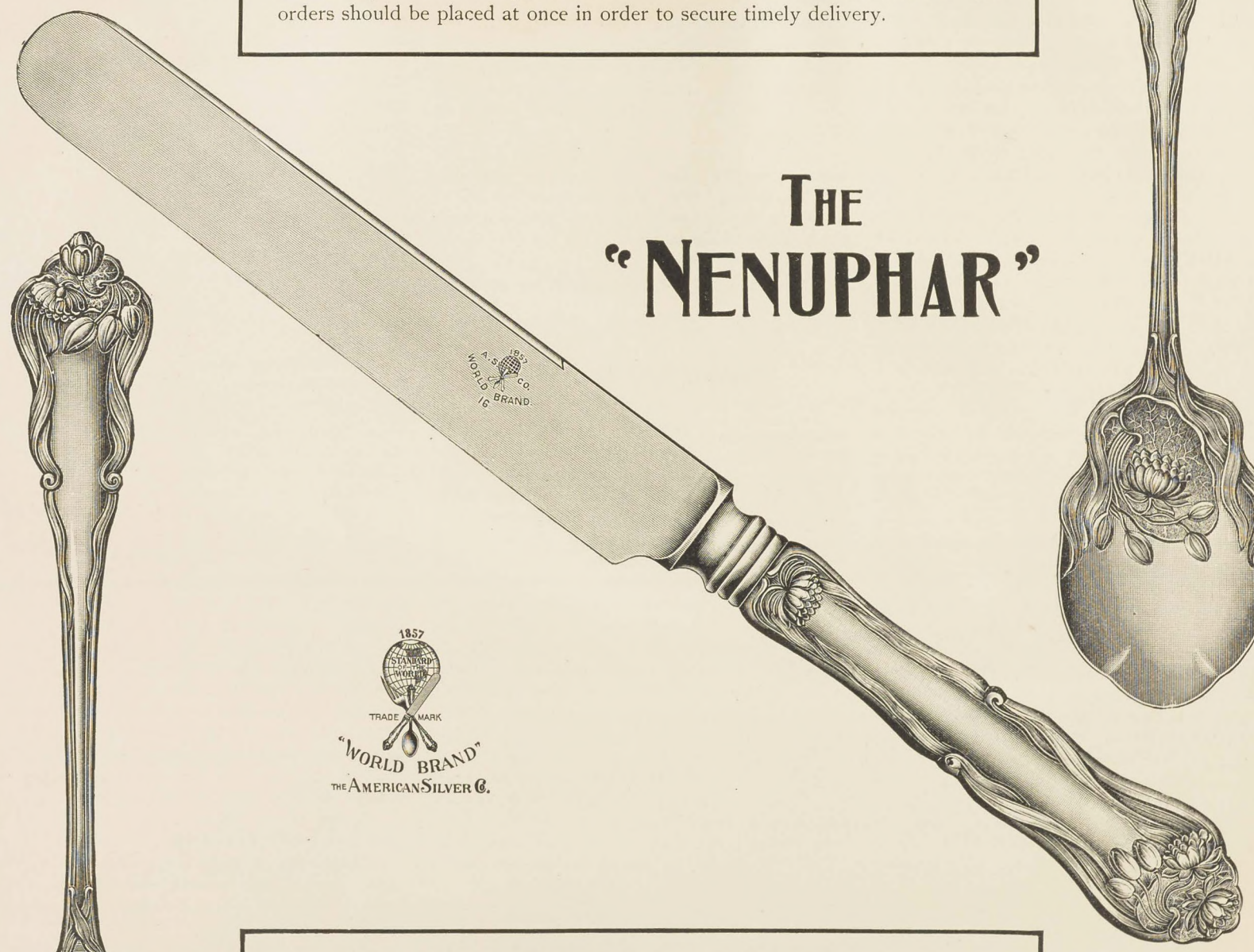
Z. T. Scott, formerly a student at the Omaha Horological and Optical Institute, has taken a position with Mrs. Godfrey, at South Omaha, as a watchmaker.

Dee W. Johnson, Albia, Iowa, was in the city recently and bought an opening stock.

For the Holiday Trade

The artistic beauty which characterizes all designs bearing the "World Brand" trade-mark is emphasized in the "NENUPHAR" pattern, which is now being offered to dealers as particularly adapted to the holiday trade. The design is elaborate, and only the superiority of our die work renders it possible to reproduce the exquisite details. Such is the demand for this line that orders should be placed at once in order to secure timely delivery.

THE "NENUPHAR"



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STANDARD OF THE WORLD
TRADE MARK
"WORLD BRAND"
THE AMERICAN SILVER CO.

The "World Brand" Guarantee

We assist the dealer in making his sales by furnishing a quality of silverware that is its own best argument. The fact that our products carry 50% HEAVIER PLATE THAN ANY STANDARD GOODS ON THE MARKET insures them a ready reception on the part of the purchaser. The dealer who neglects to add our popular silverware to his stock is omitting the most profitable line he could possibly carry. Send for our new booklets; they are interesting alike to dealer and consumer.

The American Silver Company

Bristol, Conn.

SALESROOMS

New York **Chicago** **St. Louis**

St. Louis Letter

(*Continued from page* 1583)

Thomas Adams, who was here doing some buying and looking over the World's Fair.

Eugene P. Coho, of the Hamilton Watch Company, Lancaster, Pa., was in St. Louis for several days last month, doing the Fair.

John W. Adams, of Adams & Cooper, Marshall, Mo., was a World's Fair visitor here last month.

George H. Gardiner, with Charles S. Stifft, the well-known Little Rock, Ark., jeweler, spent a week in St. Louis last month, accompanied by Mrs. Gardiner. They were doing the Fair to their great delight and pleasure.

N. Becker, San Antonio, Tex., was among the many Southern jewelers who spent some days in St. Louis last month, looking over the World's Fair while doing their fall buying.

W. G. Speck, of Ripley, Tenn., was in town for several days last month, enjoying the sights at the World's Fair as well as doing some buying for the home store.

W. B. Wiley, of Minden, La., was a welcome visitor in this market last month. Mr. Wiley was enjoying a few days at the World's Fair as well as attending to his fall buying.

M. F. Kohler, of Parsons, Kans., was among the throng of Kansas jewelers here for a few days last month, looking over our World's Fair and doing some fall buying.

Sherman W. Moody, of Grand Junction, Colo., was here for a week last month, taking in the World's Fair and selecting his fall bills.

Charles S. Erber, of Texarkana, Tex., spent a week in St. Louis last month, doing the Fair and selecting his fall goods.

F. W. Swearingen, of Topeka, Kans., was among the many World's Fair visitors here last month from the West. Mr. Swearingen was delighted with our big show and regretted that he had not more time to devote to it.

August Bruder, the well-known jeweler of Fort Wayne, Ind., was here for several days last month, enjoying our World's Fair.

F. J. Jacquemin, of Charles B. Jacquemin & Co., Helena, Mont., spent a week in St. Louis last month, looking over the World's Fair. Mr. Jacquemin was well pleased with our wonderful Exhibition, and said that it was well worth the trip he had made to see it.

H. C. Miller, of Sapulpa, I. T., spent several days here last month, investigating the Fair and doing his fall buying.

R. D. Worrell, of Mexico, Mo., spent several days in town last month, attending to some buying and looking over the Fair.

Dan D. Williams, the well-known jeweler of Emporia, Kans., and Mrs. Williams, spent several days here last month viewing the World's Fair.

S. C. Scott, with the Carter-Allen Jewelry Company, Shreveport, La., spent several days here last month looking over the World's Fair. He was accompanied by his bride.

L. Prager, of Fort Scott, Kans., was here for several days last month, looking over the Louisiana Purchase Exposition.

H. P. Alsted, head of the Alsted-Kasten Company, a leading retail house of Milwaukee, Wis., spent three weeks in St. Louis last month, taking in the World's Fair. Mr. Alsted served as a juror on the International Jury of Awards in the section that passed on the exhibits of the silversmiths, goldsmiths, jewelry, watch, clock and kindred trades, which kept him quite busy for the first ten days of his visit. When met by THE KEYSTONE representative, Mr. Alsted said he found the Exposition of surpassing interest and beauty. That there was not only more to see than there was ever exhibited at any previous Exposition, but more "going on" all the time. He thought our World's Fair should be seen by every American who has any pride in the achievements of his race.

Harry C. Walton, Cincinnati agent for The Keystone Watch Case Company, and Mrs. Walton, spent several days in St. Louis last month, looking over the World's Fair.

J. P. Holland, with the Seth Thomas Clock Company, New York office, spent a few days here last month, viewing the World's Fair.

S. H. Avey, of S. H. Avey Co., Auburn, Nebr., was in St. Louis for a week last month, taking in the Fair and doing some fall buying.

B. A. Isaces of B. A. Isaces & Co., Galveston, Tex., was here several days last month, looking over the big show at Forest Park. Mr. Isaces thought the World's Fair a wonderful success and well worth the trip to see.

The St. Louis Clock and Silverware Company will send out to the trade early in October their new fall catalogue. The new book will be larger and handsomer than usual. It will illustrate and describe the different lines they handle, and the live jeweler will find it a useful and helpful handbook to have around.

J. C. Grogan, head of the well-known retail house of J. C. Grogan & Co., Pittsburg, Pa., was here for two weeks last month, serving on the International Jury of Awards at the World's Fair in the section that passed on the jewelry, silverware, watch and clock exhibits. Mr. Grogan, who was Chairman of the Jury, expressed himself as delighted with the Exposition, which he was seeing at its zenith. His only regret was that he did not have more time to devote to it.

Wm. J. Benn, representative of THE KEYSTONE, and Mrs. Benn, spent several days at the Fair last month. Mr. Benn was glad to be able to look over our wonderful Exposition even for a few days, as he believed it was the greatest educational opportunity of the century.

Leo Bauman, the worthy son of President Samuel H. Bauman, of the Bauman-Massa Jewelry Company, celebrated his twenty-first birthday recently by giving a dinner party to his friends. It was given out at the dinner that one of his presents was a gift of 50 shares of stock in the firm from his father. Young Bauman is a member of the firm's traveling force and has a bright future.

The firm of Kennedy & Co. has been incorporated here with a capital of $10,000, full paid, to do a general wholesale and retail jewelry business. The incorporators are Alexander C. Kennedy, 98 shares; John H. Boka and Arthur C. Engler, 1 share each.

Loftis Brothers & Co., Chicago, have established an exhibit of diamonds and precious stones, with a complete diamond-cutting plant in operation, in the Varied Industries Building at the World's Fair. Their display is a novel one, and attracts large crowds daily.

Geo. W. Ellis and C. R. Gaines, of the Geo. W. Ellis Jewelry Company, Butler Mo., spent a week in St. Louis last month, viewing the World's Fair and doing some fall buying.

E. F. Mayer, of Butte, Mont., was among the throng of Western jewelers who spent several days in the city last month, looking over the St. Louis World's Fair.

Jeweler S. W. White, of Hope, Ark., a familiar and always welcome figure in this market, spent a number of days in the city the early part of last month, in company with Mrs. White, their daughter, Miss Carrie, and Master Fred, doing the World's Fair to their delight and pleasure. Mr. White has been a regular visitor to this market for thirty years past, and never fails to do some buying. He reports business as good in his section, with excellent prospects for a fine fall and holiday business.

A. M. Kelly, of Jefferson, Tex., was among the many jewelers here last month from the Lone Star State, doing the World's Fair. Mr. Kelly was attending to some fall buying as well.

C. F. Kleine, of San Antonio, Tex., was in St. Louis for several days last month, buying goods and looking over our World's Fair.

The Rock Island Jewelry Company is the name of a jewelry firm just opening a new store at Eldon, Mo. Mr. J. Wohlgemuth, the manager, was in this market for several days last month, selecting his opening bill.

Among the many jewelers who were in St. Louis last month, visiting the World's Fair and doing some buying, we will mention the following: George Noterman, Nokomis, Ill.; Aloy Gerber, Edwardsville, Ill.; F. C. Hartleb, Belleville, Ill.; Aug. Winkler, Poplar Bluff, Mo.; J. C. Wieser, Roodhouse, Ill.; J. H. Tetley, Flat River, Mo.; J. H. Perkins, Poplar Bluff, Mo.; W. E. Osterwald, Festus, Mo.; J. W. Acklin, California, Mo.; Wm. Brazeale, Pacific, Mo.; H. Haverkamp, Troy, Mo.; Hy Croessman, Duquoin, Ill.; J. P. Gardner, Sparta, Ill.; R. A. Dunlap, Festus, Mo.; F. Couvoisier, Freeburg, Ill.; C. L. Goulding, Alton, Ill.; E. G. Bersche, Columbia, Ill.; Jas. B. Meyer, Coffeen, Ill.; T. S. McCall, Kirksville, Mo.; W. H. Wheeler, Palmyra, Ill.; A. Y. Boswell, Tulsa, I. T.; J. F. Swain, Sparta, Ill.; R. L. Falk, Bowling Green, Mo.

Victor Hume, of Vicksburg, Miss., spent a week in town last month, viewing the big show at Forest Park and doing some fall buying.

J. T. Inman, of the manufacturing firm of J. T. Inman & Co., Attleboro, Mass., was here a day or two the early part of last month, looking over our World's Fair and calling on our wholesale trade at the same time. Mr. Inman was greatly pleased with our big show.

John F. Boddeker, with Jeweler J. L. Mitchell, Houston, Tex., visited St. Louis for a few days last month. He was looking over the World's Fair, and expressed himself as well pleased with the wonderful Exposition at Forest Park.

Among a number of Iowa jewelers here last month, looking over the World's Fair, was C. Dalin, of Ottumwa. Like most of our visitors these days, he expressed himself as highly pleased with our Fair.

John W. Brenneman, of Terre Haute, Ind., was here last month, combining business with pleasure, though he devoted the greater part of his time to looking over our World's Fair, which he enjoyed greatly.

R. M. Mothner, of Beaumont, Tex., was among the many Southern jewelers in St. Louis last month, doing the World's Fair and some fall buying at the same time. The Ivory City proved a delight to Mr. Mothner and he voted our big show an immense success.

Jeweler J. Louie, of Monroe, La., was among the throng of Southern jewelers who were spending some days in town last month, looking over our World's Fair and attending to their fall buying.

Charles Ragsdale, Brownwood, Tex., spent a week in St. Louis last month, doing the World's Fair and looking after his fall purchasing for the home market.

M. F. O'Brien, with the Illinois Watch Company, Springfield, Ill., was here for a few days last month, looking over the Fair.

Fred D. Studebaker, of Alum Cave, Ind., was in St. Louis for a week last month, looking over the World's Fair, much to his delight and pleasure.

Frank M. Dale, son of Jeweler Dale, Sullivan, Ind., spent some little time here last month, looking over our World's Fair.

J. W. Helfrich, of Carrollton, Ohio, spent a number of days in town last month, doing the World's Fair to his pleasure and profit. Mr. Helfrich expressed himself as greatly pleased with our big show and regretted that he did not have more time on his hands to enjoy it.

Charles S. Stifft, the well-known jeweler of Little Rock, Ark., was a World's Fair visitor here for a number of days last month. He was doing some fall buying as well as enjoying the delights of our big show.

Charles F. Smith, of King & Eisele, wholesale, Buffalo, N. Y., was among the throng of World's Fair visitors in St. Louis last month.

J. P. Miellally, of Indianapolis, Ind., spent several days in St. Louis last month, doing some fall buying and looking over the World's Fair to his pleasure and profit.

S. C. Scott, with The Carter-Allen Company, the well-known jewelry house of Shreveport, La., spent a few days in St. Louis last month, viewing our World's Fair.

Jeweler R. D. Williams, of Troy, N. Y., spent ten days in St. Louis last month, looking over the World's Fair. Mr. Williams was one of the jurors who passed on the exhibits of jewelry and precious stones.

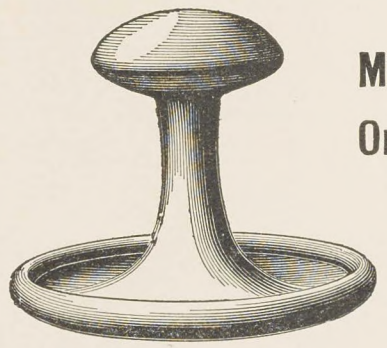
J. R. Cromer, of Cromer Bros., Fort Worth, Tex., and Mrs. Cromer, spent a week here last month, looking over our wonderful Exposition.

Jeweler John Murbach, of Elyria, Ohio, spent the last week of August looking over our World's Fair, greatly to his pleasure and profit.

1588.

The Giant of Collar Buttons

in Quality
in Sales



The Standard Collar Button

Millions of Krementz One-Piece Collar Buttons made, and are sold all over the world

WHY?

Because of their HIGHEST QUALITY, BEST CONSTRUCTION, GIVING THE MOST WEAR, AND GREATEST COMFORT and their IRON-CLAD GUARANTEE.

To verify this we invite the trade to read "**The Story of a Collar Button, with Illustrations,**" which may be had FREE for the asking, and to try the experiment suggested on page 5 of that booklet, by which all may easily determine the exact amount of 14 K. gold in Krementz plate.

Extract from "Printers' Ink," Nov. 23, 1898.

The Little Schoolmaster now suggests, to every pupil in his class, to send a two-cent stamp to Krementz & Co., 49 Chestnut Street, Newark, N. J., and ask to be favored with a copy of their leaflet, "The Story of a Collar Button." Afterward, if any pupil will send to *Printers' Ink* another leaflet, new or old, that is half as good as this one, or that approaches it in excellence, the deserving student will be rewarded with one of *Printers' Ink's* souvenir spoons as an acknowledgment of his discovery and contribution. "The Story of a Collar Button" is the best piece of advertisement construction that has come to *Printers' Ink's* attention in the year of our Lord 1898.

Should you wish to utilize this booklet to increase your collar button business, we will, on receipt of your order, print your card upon and send you a quantity of them.

The several qualities of Krementz One-Piece Collar Buttons are stamped as follows, ON BACK:

Patent Sustained by United States Supreme Court

Quality and Construction have made Its Reputation

All Krementz Collar Buttons—of every quality—are Manufactured by

KREMENTZ & CO.

in their Factory

49 Chestnut Street
NEWARK, N. J.

PARKS BROS. & ROGERS
20 Maiden Lane, New York
Selling Agents to Jobbing Trade

Clean to Handle

The Best Pen in the World

Every Pen Unconditionally Warranted

All Pens Shipped Filled Ready for Use

SEND FOR CATALOGUE

American Fountain Pen Co.

168 Devonshire St., Boston, Mass.

RINGSET COMPANY

are selling their ringset outfits for making fifty different styles of wedding rings, any finger size, for $25; uncut mold-blocks, $6 per gross; single sample molds, any size and weight of wedding ring, 10 cents. As to our Outfits and new Burno Crucible, see KEYSTONE for Nov. and Dec., 1903, and June and July, 1904.

We manufacture many styles of Diamond Settings, Tiffanies, etc., molds $1 a dozen. Rings made in our molds equal to the best of wrought work. Catalogue on application.

Address

8 Waltham Street, BOSTON, MASS.

Dallas and the Lone Star State

R. L. Morehouse, at one time in business at Fort Worth, but who has been traveling over the country of late years for his health, is now with Hunter & Freeman, of Belton. His health is much improved.

Ed. Newman, who has been working for H. D. Leffel, of San Angelo, has resigned his position and gone on a large ranch near San Angelo.

B. R. Stocking, of Belton, is having a stone building repaired and fitted up as a jewelry store.

S. R. Glidewell, of Whitewright, was a recent buyer in this market.

M. Holland, of Marshall, was in Dallas recently buying his fall stock.

Joe M. Wilson, who has been with G. A. Pfaeffle, of Greenville, for a number of years, has resigned and accepted a position with Morgan & Hawley Co. as engraver.

J. P. Morgan, of Morgan & Hawley Co., has been visiting New York, Chicago and the St. Louis world's fair.

L. D. Wardin, who resigned his position with Morgan & Hawley Co., has gone to California to take a position.

R. L. Russell, of Farmersville, was a recent visitor to Dallas.

J. M. Grogan, of Arlington, was visiting in Alabama for several weeks recently. He is now busily engaged in preparing for his business.

J. H. Hill, Jr., of Rockdale, has recently been taking in the world's fair.

W. M. Kidd, with Shuttles Bros. & Lewis, has returned from the St. Louis fair.

H. C. Leach, of Beaumont, spent a week in St. Louis last month.

P. W. Denny, of Springtown, was a welcome visitor and buyer in the Dallas market recently.

A. M. Wesson, of Midlothian, purchased his fall stock in this market recently.

S. H. Babb and family left on September 21st for a visit to the world's fair, and will extend their trip to Chicago.

W. T. Morehead and Frank E. Yantis, jewelers, of Sulphur Springs, who were both ill recently, are again able to attend to business.

O. H. Ross, of the Ross Jewelry Co., of Waxahachie, will open a store in Fort Worth, in conjunction with Jeweler Armstrong, of that place. The firm will be known as the Ross-Armstrong Co. Bismark Heyer will continue as formerly as manager of the Waxahachie store.

A. A. Everts, of Dallas, spent several days in Waco, recently, going as delegate to the State Prohibition Convention.

T. J. Dantzler, of Corsicana, contemplates moving into a larger store, which ne intends to furnish in handsome style.

Mr. Guthrie, formerly watchmaker for L. E. Griffith, of Terrell, has invented an ingenious electrical machine, and has sold it to a St. Louis firm, with which he has accepted a position.

Geo. F. Flynt, of Mineola, has moved into his new store, which is one of the handsomest in East Texas.

J. G. Thompson & Son is the name of a new firm which has recently gone into business at Corsicana. Mr. Thompson, Jr., was formerly in business at La Port, Texas.

J. O. Baker, of Collinsville, was in Dallas, recently, purchasing his fall stock.

J. A. DeGaugh, of DeGaugh Bros., of Terrell, Texas, recently left on a visit to New York and the St. Louis world's fair.

J. V. Searcy, formerly of Terrell, is now at Wills Point and is well pleased with his new location.

Bismark Heyer, of the Ross Jewelry Co., of Waxahachie, was recently called to the bedside of his wife, who has been ill at her old home in Columbus, Texas. We hope soon to be able to report Mrs. Heyer's complete recovery.

G. C. Newton, of Waxahachie, went to St. Louis, recently, to visit the World's Fair.

J. Levytansky, of Waco, has his new store building nearly completed, and when fitted with the new fixtures which he has ordered it will be one of the finest stores in that part of Texas.

Kansas City and the Great Southwest

Improving Trade Conditions

Everybody in the jewelry business is in a much better frame of mind than at the same time last month. Business has picked up finely during the past few weeks, and the cry of "presidential year" has ceased to have any terrors. All of the big jobbing houses report that business last month was up to the mark of the same month in 1903, and now with the fall season opening up there seem to be prospects of a very good trade in spite of the election. Conditions throughout the country are improving, and things in general are turning out much better than was expected in view of the unprecedented rains and their effect upon crops in Missouri, Kansas and Nebraska.

The Fall Festivities

Next week will mark the annual fall festivities which have come to be a part of life in Kansas City. A large crowd is expected from out of town, and the wholesale houses are always thronged with visitors who combine bnsiness and pleasure. This season many are expected to take advantage of their stop-over privileges on St. Louis tickets and take in Kansas City's big show. One well-known wholesale jewelry firm has printed on all of its envelopes the line, "Take advantage of the stop-over on your St. Louis tickets and come and see us." The fall festivities this year are unusually elaborate. They will include the great electrical parade of the Priests of Pallas, October 4th; the Priests of Pallas ball, October 5th; concerts by Sousa's Band and the Epperson Megaphone Minstrels, October 6th, and the big bal masque of the Priests of Pallas, October 7th.

The Meyer Jewelry Company is still looking for new quarters, and is considering several locations, though none has as yet been decided upon.

J. Dorst, of Dorst & Co., has gone to Cincinnati to remain several weeks at the home factory.

J. D. Taylor and wife, of Hobart, Ind. Ter., passed through Kansas City, en route home from the world's fair, last month.

J. R. Mercer, who has been fishing at Catalina Island, is the hero of the season at that popular resort. He recently succeeded in landing a 306-pound sea-bass, which he captured after a desperate struggle lasting forty-two minutes. Next!

O. G. Cady, of Alamogordo, New Mexico, called on the Kansas City wholesale houses last month.

L. D. Harry, of Norwich, Kans., and J. G. Bellamy, of Slater, Mo., bought goods here last month.

Mr. Hinsey, of Hinsey & Meinhart, Muskogee, Ind. Ter., was a Kansas City visitor recently.

C. W. Crosby, formerly of Dubuque, Iowa, has opened very handsome optical parlors in the Owens Building, Eleventh and Walnut Streets.

F. J. Waltman, the manufacturing jeweler, of Quincy, Ill., spent a short time in Kansas City, en route home from Colorado.

Felix Fricke, of Meyer's, accompanied by Mrs. Fricke, has returned from the world's fair.

Harry B. Carswell made one of the largest retail sales of silverware that has been made in Kansas City lately. He fitted out a chest of 350 pieces of solid silver which was ordered by a wealthy resident of Acandra, Mexico, as a wedding present for his daughter. The silverware was in the Stratford pattern, and the chest included every known sort of flatware. In addition to this chest of silver, the same purchaser ordered a solid silver tea set of five pieces, the price being $265.

Otto Snyder, of Hammel, Riglander & Co., of New York, was a passenger on the Rock Island train which was held up in Illinois on the night of September 12th. No attempt was made to rob the passengers, so Mr. Snyder escaped with a whole pocketbook but with a considerable shock. When the train was halted Mr. Snyder put his head out of the window to see what was the matter, and found himself looking down the barrel of a six-shooter, as a voice told him with more force than elegance to "duck his nut." Needless to say he obeyed, and all of the passengers kept very quiet while the robbers looted the express car.

Andy Manifold, of Beloit, Kans., was a visitor to the Kansas City wholesale houses lately. Mr. Manifold was also particularly well known for his connection with the Beloit Band, one of the best of such organizations in the State of Kansas. His friends expected him to talk band as usual, and were surprised to find on the occasion of his last visit here that Mr. Manifold had adopted another hobby in the automobile. He is the owner of a fine machine, and has become a devoted enthusiast on the subject of motoring.

John M. Scott, formerly manager of the optical department of Emery, Bird, Thayer & Company, has opened new optical parlors of his own at 1025 Main Street.

L. Megede, of Richmond, was a visitor to the Kansas City wholesale houses recently.

F. Kolstad, of Pleasant Hill, called on Kansas City friends last month.

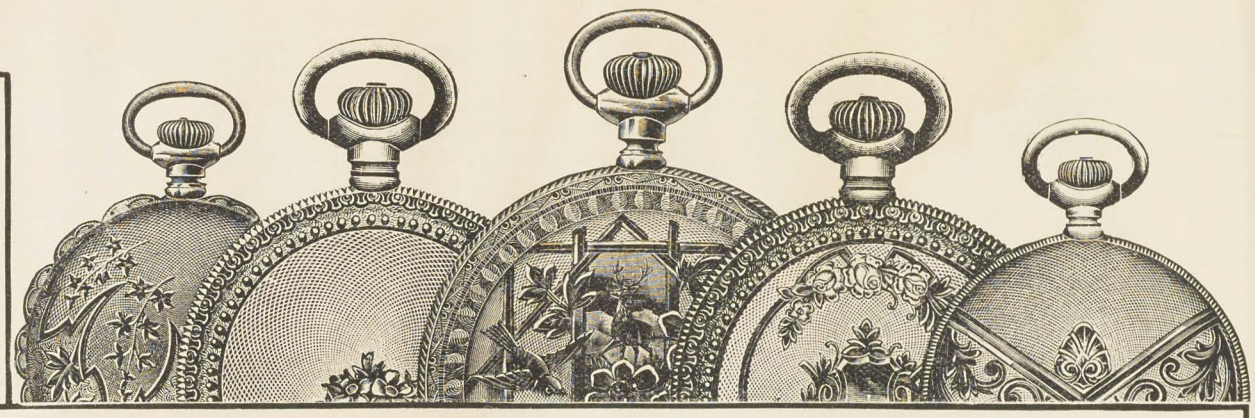
Harold Bradshaw and Louis Hayman, of Meyer's, are back from a trip to the world's fair.

F. D. Reynolds, formerly with J. S. Pfeiffer Parsons, Kans., has succeeded F. C. Fagercrans, of Topeka, Kans.

A. G. House, formerly of Belton, Mo., but now of Philadelphia, visited Kansas City recently.

Among the out-of-town jewelers and opticians who called at the wholesale and jobbing houses during the last week were: T. S. Mendenhall, Burr Oak, Kans.; W. W. Whiteside, Liberty, Mo.; R. O. Shenkner, Weston, Mo.; F. M. Dillon, Bonner Springs, Kans.; S. J. Huey, Excelsior Springs, Mo.; W. E. Crellin, Chillicothe, Mo.; M. O. Stanley, Gallatin, Mo.; C. K. Shortless, Coalgate, Ind. Ter.; W. H. Meyer, Lawson, Mo.; B. G. Gustafson, Lawrence, Kans.; J. B. Hampton, Colby, Kans.; Gordon Rushmer, Pueblo, Colo.; Frank Sparks, Loyalton, Colo.; Mr. Bass, of the Bass Jewelry Co., Huntsville, Mo.; W. M. Kassell, Pittsburg, Kans.; C. E. Durall, Kincaid, Kans.; C. A. Clement, Springfield, Mo.; Walter Starcke, Junction City, Kans.; George Powell, Mena, Ark.; W. F. Brown, Sterling, Kans.; J. A. Schmidt, Leavenworth, Kans.; J. A. Mosher, Burlington, Kans.; F. D. Reynolds, Topeka, Kans.

Watch House of the Northwest



WATCHES ARE OUR SPECIALTY

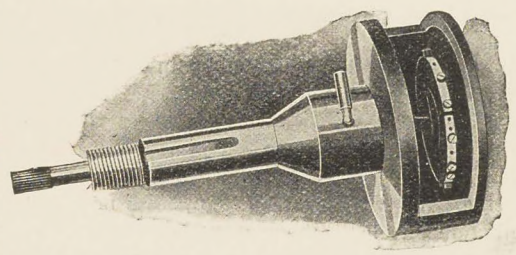
We have concentrated all our attention, energy, resources, experience and enthusiasm on this one line. That's why we can justly claim leadership as the watch supply house of this section, and prove our claim by a stock so large and comprehensive that *every watch need* of the jeweler can be supplied promptly and satisfactorily—a little better, a good deal quicker and more to his advantage than from any other center.

We are in closest touch with the leading watch and watch case manufacturers, and are headquarters in this section for Elgin and Waltham movements and all the standard makes of cases. Our Railroad Watch Department is given our special care and attention.

We issue no catalogue and sell to jewelers only. Consult your self-interest and communicate with us. You will find it a convenience and an economy.

ALBERT L. HAMAN, — WATCHES AT WHOLESALE —
281-282 Endicott Building, ST. PAUL, MINN.

CULMAN
Balance Chuck



For Refinishing Balance Pivots, without removing the Hair-spring or Roller, and protecting them while the pivots are being polished.

THE GREATEST TIME-SAVER EVER OFFERED TO A PRACTICAL WATCHMAKER.

Its essential points are: It will hold true anything with conical pivots, such as balance wheels, escape wheels, and pallets of high-grade watches; also all cylinder balances. It gives you the entire length of the pivot to work on; it protects the part held from any chance injury.

No more twisted hairsprings, bent balances or cracked rollers. It is impossible to remove a hairspring or roller without getting the balance out of true, which changes the rating of the watch, and causes the loss of much time to true up the balance again. All this is avoided by the use of my chuck.

You can do a better job with it in two minutes than you ever could in the old way.

Once accustomed to its use, you will never be without it, and you will use it oftener than any other chuck you have.

PLEASE MENTION NAME OF LATHE WHEN ORDERING.

I reserve the right not to make these chucks for obsolete lathes for which there will be too small a demand.

Is your time worth anything? Then save it. Read these letters from satisfied customers:

A. K. JOBE
DIAMONDS, WATCHES AND ART WARES

Jackson, Tenn., July 11, 1904.

MR. C. CULMAN, St. Louis.

Dear Sir:—I take pleasure in paying for the Balance Chuck you sent me June 15th. I find it is in use almost daily in my watch repairing department and saves lots of time.

Very truly yours, A. K. JOBE.

ALFRED H. KENT
JEWELER, STATIONER AND OPTICIAN

Mt. Clemens, Mich., July 30, 1904.

MR. C. CULMAN, St. Louis, Mo.

Dear Sir:—I have pleasure in informing you that the chuck which I purchased of you some time ago is very satisfactory; I find it a great time and labor saver.

Respectfully,
ALFRED H. KENT.

T. A. MAUCH
WATCHMAKER, JEWELER AND OPTICIAN

Yazoo City, Miss., July 31, 1904.

C. CULMAN, St. Louis, Mo.

Dear Sir:—Enclosed find check for $3.50 in payment for one of your Balance Chucks, and will say that as a time saver and an all-together practical tool, I think it one of the best in use on the bench, and I don't see how any watchmaker would do without it. Hoping it will meet with the sales it surely deserves, I remain

Yours truly, T. A. MAUCH.

WM. BRAZEALE
REPAIRING A SPECIALTY

MR. C. CULMAN. Pacific, Mo., July 27, 1904.

Dear Sir:—In reply to yours would say the chuck is all right and gives good satisfaction. Would not be without it for twice the price.

Yours very truly, WM. BRAZEALE.

Price, $3.50. Your money back if not satisfied—all I ask is give the chuck a fair trial.

Order from your material jobber or direct from the patentee and maker,

C. CULMAN, Watchmaker to the Trade
316 N. Sixth St., ST. LOUIS, MO.

Jobbers supplied by C. Culman, St. Louis, and Hammel, Riglander & Co., 35 Maiden Lane, New York

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AN EAGLE CHARM that sells at all seasons of the year

No. 400. Genuine Eagle Claw

Made in 14 K. only

WRITE FOR PRICES

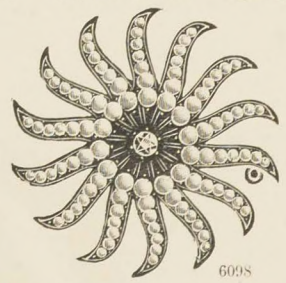
Patented Aug. 18, 1903

No. 403. Genuine Eagle Claw
17 Diamonds in Wings

E. SCHMALZ & SON, Manufacturing Jewelers
501-502-503 Chamber of Commerce Bldg., ST. PAUL, MINN.

THREE GOOD SELLERS

2351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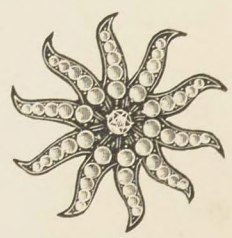

2151

2351. Clover and Crescent Brooch and Pendant or Chatelaine, set with 59 genuine half pearls, with diamond center . . . . . $7.50 10 K., $ 8.50 14 K.

6098. Sunburst Brooch and Pendant, set with 98 genuine half pearls, with diamond center . . . . . 9.50 10 K., 11.00 14 K.

2151. Sunburst Brooch and Pendant, set with 50 genuine half pearls, with diamond center . . . . . 7.50 10 K., 8.50 14 K.

Brooches without diamond centers, $1.50 less for each of the above. We will furnish you with center setting for any size stone without extra charge. WRITE FOR OUR NEW ILLUSTRATED CATALOGUE OF RINGS AND PENDANTS. Send in your orders before the rush commences.

S. FRACKMAN, 51-53 MAIDEN LANE, NEW YORK

News from the Northwest

Bright Trade Prospects

Northwestern conditions can only be reported as good. The harvest has progressed just far enough to make us feel encouraged. Everything has been safely housed, and thrashers' reports on all small grain are fully up to expectations. Some localities, as expected, are running poorly, while others, particularly in the southern sections, report the best crop for years. Corn is doing nicely, and if frosts will only hold off long enough and the nice weather continues it will also be a good crop. In the face of this and present high prices there should be an excellent fall business. Of the great crowd of visitors to the Twin Cities last month over 95 per cent. reported prospects excellent and bought accordingly, for which jobbers are very thankful. They are always glad to see their customers face to face, and it does the retailers good to get to market once in a while, renew acquaintances, and at the same time get new ideas to help them along in their business. Travelers report business very good, and home forces are working full time trying to keep even with orders. Collections are reported as coming in better than for some months, and should be even better next month, as farmers are bringing to market the crop which present high prices are bringing in earlier than usual. We know of one farmer who hauled in his wheat, sold it for $1.07 per bushel, saying "there goes my crop of two years ago." This is certainly a fair specimen of the well-to-do farmer in this section. The tornado which visited the Twin Cities August 20th touched the jewelers very lightly. Bullard Bros., St. Paul, Minn., had their swinging watch sign blown down; H. Jacke and C. S. Sutter, St. Paul, had small windows blown in. In Minneapolis about the same damage was done, but at Lake Minnetonka the summer home of Ed. Best, optometrist, of Minneapolis, was destroyed, entailing a loss of $4,000.

Geo. A. Lhamon has left the employ of M. C. Meeker, Farmington, Minn., and will go to St. Joseph, Mo., where he will devote himself to optics exclusively.

The jewelry store of Becker & Klinger, Mitchell, Iowa, was entered by burglars last month, who succeeded in carrying away about $700 worth of goods.

G. R. Oren, formerly at Summit, S. Dak., is now with W. R. Vrandenberg, Superior, Wis.

D. B. Bryant, for several years with W. M. James, Breckenridge Minn., is now on the road for Albert L. Haman, the St. Paul Watch Jobber, and is sure to make a success of it.

H. G. Hanson, Winona, Minn., has gone to work for Foster & Hoover, Truman, Minn.

F. B. Sweazy, for the past year instructor at Stone's School of Watchmaking, St. Paul, has gone in business for himself at Walnut Grove, Minn.

S. J. Stieglitz has moved from Faribault to Crookston, Minn.

Fred Lanctot, Crookston, Minn., reports a new baby girl at home.

Leo Sherfius, Chinook, Mont., was severely burnt by an acetlyne gas explosion last month.

The Goodman Jewelry Company succeed Folker's Jewelry Company at Bemidji, Minn.

Thos. Darrow is a new jeweler at Utica, Minn.

The Anchor Silver Plate Company, St. Paul, had one of the best exhibits at the recent Minnesota State Fair, where they showed an elegant line of goods of their manufacture. They also had a large "Rest Tent" on the grounds, where visitors were allowed free use of chairs, and while resting were entertained by a graphophone concert. Mr. Seliger certainly did himself proud in this act, and thousands of people went home thanking the Anchor Silver Plate Company for its foresight.

B. J. Westinghouse, Wabasso, Minn., sold out his stock to Ernest G. Wing, who has removed same to Comfrey, Minn. Mr. Westinghouse has gone to work for M. C. Meeker, Farmington, Minn.

The stock of W. R. Vrandenberg, Superior, Wis., was damaged last month by gas leaking through a defective plug, which blew out. The loss is estimated at $1,000.

O. K. Berglund, Lake Mills, Iowa, has returned from North Dakota where he has a large farm. He reports his crop good.

John Fisher has begun business at Milner, N. Dak.

Benj. Marx, of D. Marx' Sons, St. Paul, has returned from a six months' visit in Europe.

Floyd Dillon, son of Geo. W. Dillon, Manley, Iowa, is taking a course in jewelry manufacturing and lapidary work at Peoria, Ill.

Mel Sherfius, Sauk Center, Minn., has moved into his new store.

John Buehler, Jr., Waukesta, Wis., a graduate of the Bradley Polytechnic Institute, is now at work for P. A. Clemmer, Cresco, Iowa.

Houghton & Ray succeed E. S. Houghton at Brainerd, Minn.

C. F. Schatz, Wykoff, Minn., is now nicely located in his new store.

O. N. Steenstrup, formerly at Truman, Minn., is now working for A. Bachman, Preston, Minn.

P. A. Schonsberg is a new jeweler at West Salem, Wis.

Clifford V. Bates, Huron, S. Dak., was married at Yankton, S. Dak., to Miss Kate Francis last month.

L. D. Peet, La Crosse, Wis., has moved into his new store building.

J. L. Williams, Zumbrota, Minn., spent several days visiting friends in the Twin Cities last month.

E. C. Bennett has moved from Zumbrota, Minn., to Frederick, Wis.

H. L. Gates, Rochester, Minn., was among the unlucky ones in the Rosebud Reservation drawing. Harvey does not as a rule draw blanks, and was a little surprised.

D. J. Chatham, formerly with Stoddard & Wood, Stewartville, Minn., is now with Martin C. Weyer, Faribault, Minn.

G. B. Ellestad, Lanesboro, Minn., has returned from a three weeks' vacation.

Wm. Pieters, Madison, Minn., has moved into his new store.

H. Abrahamson is now at Wentworth, S. Dak.

R. Branchaud, Cavalier, N. Dak., reports a new girl at his home.

R. W. Main, Cando, N. Dak., is at St. Louis, taking in the fair.

H. O. Sheldon, Bottineau, N. Dak., announces the arrival of a baby boy weighing 15,600 carats.

Otto Mathes, lately with D. E. Farmer, Stewartville, Minn., is now with Stoddard & Wood, same place.

Fred Ohm, Jr., with F. Willman, Stillwater, Minn., spent a week's vacation at Eau Claire, Wis., last month.

Arvid Ostenberg, formerly with A. I. Shapira & Bro., St. Paul, is now with Geo. R. Holmes.

E. J. Collick, formerly with Geo. R. Holmes, St. Paul, is now with White & McNaught, Minneapolis.

Geo. H. Spofford, Long Prairie, Minn., has moved into his new store.

Philip L. Lillie, Spring Valley, Wis., had the misfortune to slip and fall and hurt his hip, which will compel him to stay in bed for several weeks.

H. G. Gebhart, Flandreau, S. Dak., has moved into the post office, and with his handsome new fixtures now has one of the finest stores in his section.

The following took advantage of the low excursion rates to the Minnesota State Fair to visit Twin City jobbers: Geo. B. Johnston, Pipestone, Minn.; A. Nelson, Toronto, S. Dak.; F. K. Randall, Phillips, Wis.; H. G. Engstrom, Cokato, Minn.; S. Hawkinson, Jr., Grove City, Minn.; L. H. Julsoud, Houston, Minn.; Larry E. O'Connor, Grand Forks, N. Dak.; John Boerner, Duluth, Minn.; C. O. Borgesrode, Winsted, Minn.; F. W. Seaman, St. Croix Falls, Wis.; H. O. Thomas, Hampton, Iowa; F. J. Stebbins, Thief River Falls, Minn.; I. M. Radabaugh, Hastings, Minn.; Wm. J. Krueger, North Branch, Minn.; John Koelbe, Park River, Minn.; J. O. Sognesand, Rochester, Minn.; O. Larson, Bowdle, S. Dak.; H. T. Holverson, Alexandria, Minn.; Luther A. Freeman, Cloquet, Minn.; E. F. Minder, St. James, Minn.; Sam B. Millard, Litchfield, Minn.; L. E. Bryant, Belleplaine, Minn.; Nordahl C. Unseth, Grantsberg, Wis.; Paul Gerard, East Grand Forks, Minn.; P. Bloomstrom, Escanaba, Mich.; Herman Osterberg, Superior, Wis.; Wm. Krohn, Annandale, Minn.; J. L. Moody, Ellsworth, Wis.; T. J. Thompson, Barron, Wis.; Stephen Christopher, Duluth, Minn.; A. J. Johnson, Ada, Minn.; C. E. Peterson, Pepin, Wis.; C. C. Raddatz, Lewiston, Minn.; Julius Anderson, Mora, Minn.; E. A. Arhart, Lisbon, N. Dak.; W. M. Jurgeson, Little Falls, Minn.; H. H. Buck, Goodhue, Minn.; Miss Lillie, Spring Valley, Wis.; Fritz Hoefer, Aurora, Neb.; Martin J. Swedlund, Minot, N. Dak.; G. M. Gazely, Arlington, S. Dak.; Louis P. Mahler, Olivia, Minn.; Wm. Lenz, Osakis, Minn.; F. M. Harper, Renville, Minn.; H. C. Thies, Le Sueur Center, Minn.; W. S. Blake, Duluth, Minn.; E. F. Huhner, Stillwater, Minn.; A. M. Wilton, Alexandria, Minn.; H. M. Hitchcock, Redwood Falls, Minn.; J. B. D. Wagner, Morton, Minn.; J. F. Ahearn, Melrose, Minn.; August Gfrever, Stillwater, Minn.; C. H. Nerbovig, Mankato, Minn.; D. S. Rosenthal, Java, S. Dak.; L. Vrana, New Prague, Minn.; D. W. Smith, Pipestone, Minn.; W. W. McGuire, Northfield, Minn.; C. C. Maxwell, Arlington, Minn.; Fred Giehler, Norwood, Minn.; Oscar Blueflat, Edgerton, Minn.; S. J. Stieglitz, Crookston, Minn.; Thos. Yates, West Bend, Iowa; John C. Marx, Shakopee, Minn.; Mark Rideout, Rushford, Minn.; E. C. Bennet, Frederick, Wis.; W. G. Gould, Glencoe, Minn.; W. D. Love, Luck, Wis.; Geo. A. Lhamon, Farmington, Minn.; John Caesar, Stillwater, Minn.; O. K. Berglund, Lake Mills, Iowa; Harry Gaumanthaler, Cass Lake, Minn.; Wm. C. Hudson, Graceville, Minn.; Geo. Charland, South Stillwater, Minn.; Fred Willman, Stillwater, Minn.; F. F. Bigelow, Aneta, N. Dak.; L. B. Wheeler, Dassel, Minn.; J. H. Girvin, Mankato, Minn.; C. T. Stevenson, Madelia, Minn.; John J. Palmer, Redwood Falls, Minn.; H. W. Johnson, Detroit, Minn.; G. R. Oren, Superior, Wis.; Geo. W. Dillon, Manley, Iowa; J. L. Williams, Zumbrota, Minn.; John J. Palmer, Redwood Falls, Minn.; Prof. J. W. Grainger, Rochester, Minn.; H. W. Johnson, Detroit, Minn.

Among the Trade

The trade are invited to send us reliable items of news for this department

Illinois

Edward T. Jenison, of Jenison & Augustine, Decatur, and Charles F. Susens, left recently for St. Paul, whence they started on a trip in a fourteen-foot row boat down the Mississippi. They intend to enjoy themselves in fishing and seeing the cities along the route. The distance comprised in the trip is 900 miles and the time necessary for covering it depends on the weather. As far as the travelers have learned this is the longest trip undertaken in a small row boat since Captain Glazier's voyage in 1881, from the source of the river to the mouth, making a distance of 3185 miles.

Iowa

Herman M. Leffert, the enterprising jeweler, of Council Bluffs, recently issued a souvenir booklet, in which the interesting features and principal institutions of that city are handsomely portrayed. The frontispiece shows an interior view of Jeweler Leffert's store, which is a spacious establishment, with an ornamental ceiling, high-class wall and counter cases and copious facilities for the conduct of the business. A cut of this store also forms one of the illustrations in an elaborate page advertisement of this establishment in a Sunday edition of the Council Bluffs *Nonpareil*. This announcement had for its caption, "First in the Land," a slogan which is emphasized by the picture of an Indian on horseback brandishing a tomahawk. The policy and progress of the business are told in vigorous English, after which diamonds, watches and holiday lines are exploited in turn, the optical department also coming in for adequate notice. This advertising attains to a high standard of excellence as to style and display and should be productive of profitable results.

The Omaha (Nebr.) *Bee* says: I. J. Molby has sold his interest in the jewelry firm of I. J. Molby & Co., Creston, to L. W. Wendle, who has been connected with the firm for some time. The object of the sale is to give Mr. Molby the opportunity to devote his entire time to the music business, which he has only handled as a side line in the past.

Kentucky

T. C. Lewis has purchased the business of Lewis & Ball, Hardisburg, and that concern will hereafter be known as T. C. Lewis & Sons. T. C. Lewis, senior member of the last-named firm, is a well-known jeweler of long experience.

Maryland

J. P. Best, of Church, Pa., recently a student of the Philadelphia College of Horology, has accepted a position with Harper & Taylor, Salisbury.

Massachusetts

Edgar R. Whiting, of Pittsfield, has leased the store in the Root Block formerly occupied by a pharmacy, and has moved his jewelry store from the Burbank Block to the newly acquired location.

The Eagle Jewelry Company, Rosenberg & Co., proprietors, 353 Washington Street, Boston, was the scene of a daring robbery on the evening of September 1st. The store is on the ground floor, with an entrance on the side, the counter running along the side of the store, while at the rear is the safe. The Boston *Herald* states that at the time of the robbery a patrolman, who was passing on the route, had been called to a woman who had fainted very near the store. The officer had called the patrol wagon to take the woman to the hospital, and as it passed, the optician, who has a place in the jewelry store, went out to see what was going on. This left only a clerk in the store and he was taking the valuables from the window to put into the safe, which was open. The thief evidently was watching his chance, as while the clerk had his head in the show window, he crept into the store, and crawling to the safe abstracted three trays containing six gold and six filled watches and a tray containing thirty diamond and ruby rings. After securing his booty, the fellow sprang to his feet and dashed out of the store, the clerk just getting a glance at him as he went through the door. There was a large crowd on the street at the time, attracted by the patrol wagon, and the thief had no difficulty in making his escape up Washington Street and thence up Bromfield Street. The empty trays were found later in an alley off Bromfield Street, where he had thrown them in his flight. The robbery was at once reported to the Court Square station and a general alarm sent out, but only a meagre description of the thief could be given and at this writing he remains unapprehended.

Michigan

Arthur J. Tulian has purchased A. H. Marwede's jewelry business at Alpena. The purchaser was engaged with the former proprietor for about eight years, so he is familiar with the trade in that locality. In addition to his experience in the jewelry business he is a skillful optician, having taken courses in that science at two well-known optical colleges.

Missouri

George W. Bowers, of Bowers & Wyatt, jewelers and druggists, Lucerne, has disposed of his interest in the drug business to Webb Job, who has been connected with the store for several months.

New York

One of the most notable features of the parade in Niagara Falls on Labor Day was the handsome float of Nelson A. Soggs, the well-known jeweler, of Third Street, that city. The sides of the float were of canvas, four and a half by seven feet in size, and the ends three and a half by six feet. The float bore the following signs in bold letters: "Capital and Labor, Stop and Think! Why not go Hand in Hand, thus Prosper Fearing no Man!" The reverse side read: "Be your Brother's Keeper, Not Slave! Not Master!" On the back end it read: "Your cash returned on any transaction if you want it. Soggs, watch doctor and jeweler, 342 Third Street." Perched on top of the rear sign was a large stuffed American eagle. On either side and above the signs were four dozen "long alarm" clocks—ninety-six in all, and the entire lot "making merry chimes." In the center of all waved "Old Glory."

The marriage of Mr. Soggs to Miss Anna A. White, late of King & Eisele, Buffalo, which event we had the pleasure of announcing in our last issue, took place on September 14th, the Rev. C. H. Smith, of Swan Street Episcopal Church, assisted by Rev. Mr. Poland, officiating. The ceremony took place at the home of the bride's brother, 645 North Division Street, Niagara Falls. After the wedding supper Mr. and Mrs. Soggs left for an extended trip, stopping at New York, Providence, Boston, Waltham, and returning via Binghamton, where Mr. Soggs resided for many years.

After an absence of about two years G. A. Durussel, late of New York City, has returned to Oswego, his old home, where he is re-establishing a retail repair business at his old location, 35 Lake Street. He has installed a complete new stock and a handsome set of fixtures, and has had his store considerably remodeled and improved.

A plate glass front window, 10 x 12 feet in size, in the jewelry store of E. H. Thompson, at 302 Connecticut Avenue, Buffalo, was shattered by thieves about 2.30 o'clock on the morning of September 10th, with a crash that awoke nearly the entire neighborhood. The thieves grabbed a dozen silver spoons, jumped into a buggy and drove rapidly away. About three o'clock on the morning of the same day, four men occupying a buggy stopped in front of the jewelry store of A. H. Denny, at 253½ Virginia Street, Buffalo. They attempted to burglarize the store, but were prevented from so doing by the arrival of a patrolman. When the men saw the officer they vaulted into the buggy and rode away. About noontime word was received at police headquarters from King & Eisele, the well-known local wholesalers, that a young man was trying to dispose of some silver spoons to them. The chief of detectives detailed one of his officers to place the man under arrest, it being suspected by the chief that the fellow was one of those who robbed the Jeweler Thompson's store. As the detective stepped throngh the doorway of King & Eisele's place a young man, who evidently had seen him coming, slipped by him and hurried down the stairs. Although the officer did not know just whom he was to arrest, he suspected at once that the man who had passed him was the man he wanted. The officer started after him, but seeing that he was pursued the man started to run. There were two patrolmen a short distance ahead, and they headed off the fugitive. When the stranger saw that escape was impossible he stopped short, and the detective nabbed him. The prisoner was taken to police headquarters, where he gave his name as Timothy Widman and his age as twenty-four years. When searched a dozen spoons were found in his possession; which spoons, it is alleged, were stolen from the Thompson store. Chief Taylor thought that he had seen Widman before, and in a subsequent search through the rogues' gallery the prisoner's picture was found.

Ohio

L. V. Stone, the well-known jeweler, of Conneaut, has accepted a position as traveling representative of the Rockford Watch Co., of Rockford, Ill. He entered upon his duties in that capacity at the beginning of last month.

Oklahoma

W. A. Wright, the enterprising retailer, of Shawnee, composed a hymn dedicated to his father upon the recent celebration of the latter's seventy-eighth birthday. It is entitled, "My Cross," and besides being a very creditable performance from the view point of literary merit, breathes a fervent spirit of religious faith and resignation. It was published in the Shawnee *Quill* and favorably commented upon by that organ.

Oregon

Simmers & Freitag, composed of G. T. Simmers and L. E. Freitag, have purchased the business of the Baker City Optical and Jewelry Co., Baker City.

Pennsylvania

A pleasant and remarkable reunion of the children and grandchildren of Mrs. Jeremiah Kohler was held last month at Hanover. It was in honor of the forty-eighth birthday of her youngest son, Millard F. Kohler, a popular and prosperous jeweler, of Parsons, Kans., who journeyed to Hanover to be present on the occasion. Four generations of the Kohler family were present, among them a great grandchild of the aged mother.

Utah

The death of Mrs. J. T. Rushmer, wife of Jeweler Wm. B. Rushmer, Ogden and Salt Lake City, occurred at the first-named place on the morning of September 3d. Deceased was very popular in the social life of Ogden. She was especially zealous in the work of the First Methodist Episcopal Church there, and being gifted with musical talent of a high order presided at the organ in that institution. The deepest sympathy is felt for her surviving husband and three-year-old son.

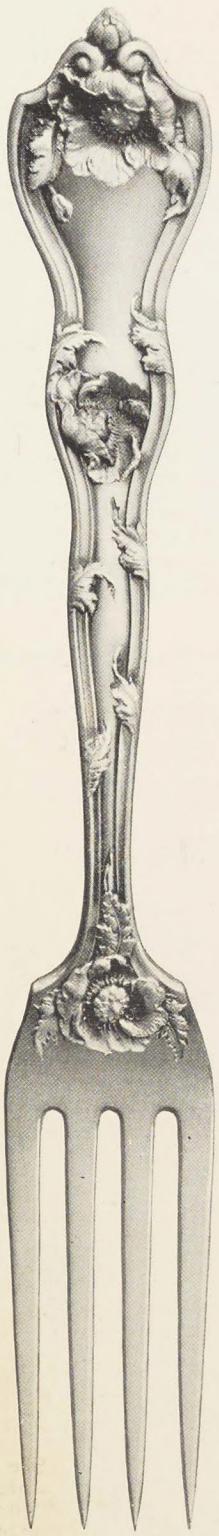
Vermont

N. S. Marshall has sold his interest in the firm of Marshall & Tyrell, Rutland, to F. T. Tyrell, who now conducts the business on his own account. Mr. Marshall entered the jewelry trade in 1872, when only sixteen years of age, at which time only a few of Rutland's merchants of to-day were engaged in business. For the last twenty-five years Mr. Marshall's name has been intimately connected with the jewelry business of the State. His plans for the future are indefinite.

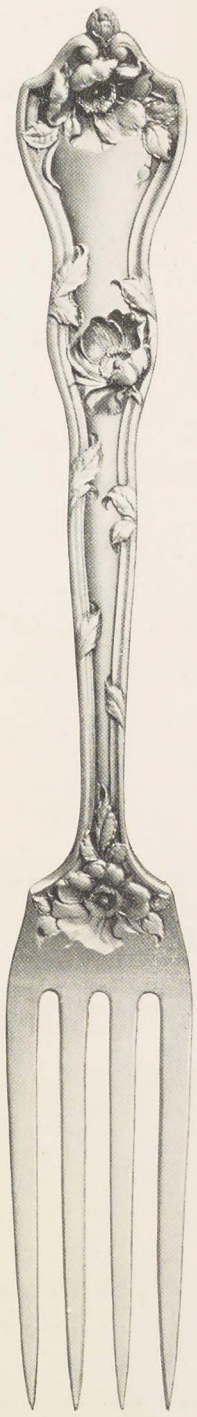
INTAGLIO CAMEO

(Designs Patented)

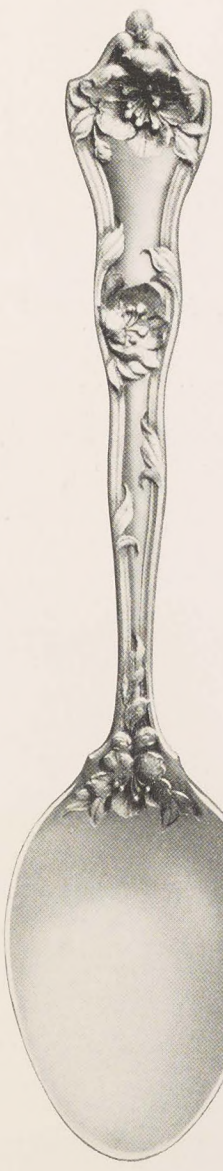
We announce the completion of a new and beautiful pattern in Sterling Silver Flatware. The effect of Intaglio and Cameo has here been produced for the first time in silverware, and by a process unique and entirely original with us. This pattern represents in reality the highest development of the art of die-sinking.



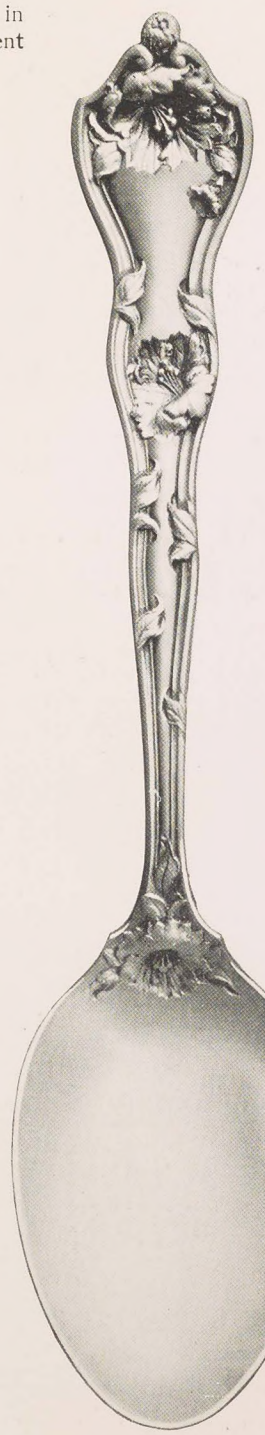
POPPY
Weights
28 and 33 oz.
Table Fork



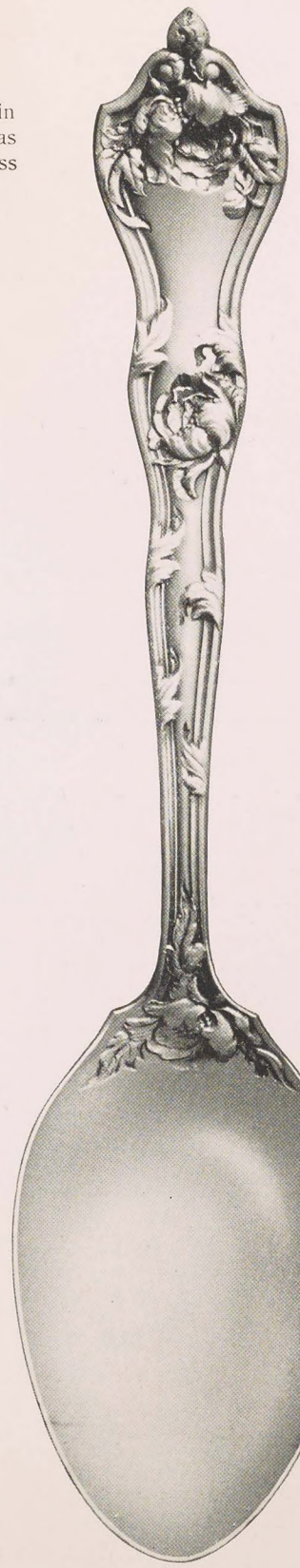
WILD ROSE
Weights
20 and 24 oz.
Dessert Fork



NECTARINE
Weights
12 and 15 oz.
Tea Spoon



PETUNIA
Weights
20 and 24 oz.
Dessert Spoon



PEONY
Weights
28 and 33 oz.
Table Spoon

REED & BARTON

Silversmiths

TAUNTON, MASS.

Salesrooms: { 41 Union Square / 6 Maiden Lane } NEW YORK — 103 State St., CHICAGO — 115 Kearny St., SAN FRANCISCO

TRADE MARK

STERLING

TO DO YOUR FALL BUYING

REDUCED FARES during the months of August, September, October and November, to the Great Western Metropolis and return, in connection with the

FALL MEETINGS, 1904, of the

National Association of Merchants and Travelers

Divisions A, B, C and D at Chicago

ONE AND ONE-FIFTH FARE.

Special Excursion Rates in the territory of the Western Passenger Association, including the following states: Iowa, Wisconsin, Missouri (both Western and Southwestern Passenger Territory), Kansas (both Western and Southwestern Passenger Territory), Nebraska, Colorado, New Mexico, on the Atchison, Topeka & Santa Fe proper; New Mexico and Arizona on the Santa Fe Pacific; Wyoming (from Cheyenne only); also in Minnesota and North and South Dakota, except on the lines of the Great Northern, Northern Pacific and Soo System, and members on those lines can secure the reduced rates from the nearest points on other lines; Northern Peninsula of Michigan on the C. M. & St. P. and C. & N. W. R'y; Illinois in Western Passenger Association Territory.

In addition to the above the following railroads make one and one-fifth fare from points on their lines in Wyoming, Colorado and Utah: The Colo. Mid. R'y, D. & R. G. R. R., O. & L. R. R., R. G. W. R'y, and Union Pac. R. R.

Special Excursion Rates in Texas, Arkansas, Oklahoma and Indian Territories on the Atchison, Topeka & Santa Fe Railway; Chicago, Rock Island & Pacific Railway; Missouri, Kansas & Texas Railway; Frisco System.

Also on other lines from points in Oklahoma, Indian Territory and Arkansas, on and north of the line of the Choctaw, Oklahoma & Gulf Railroad, from the Texas state line eastwardly to Little Rock, including the Hot Springs Division, and on and north of the St. Louis, Iron Mountain & Southern Railway, Little Rock to Arkansas City, Ark., inclusive; and the St. Louis Southwestern Railway of Texas.

In addition to the above railroads a number of others have also granted one and one-fifth fare, and the complete list of lines now having filed notices authorizing reduced rates is as follows: Atchison, Topeka & Santa Fe R'y, Chicago, Rock Island & Gulf R'y, Chicago, Rock Island & Pacific R'y, El Paso-Northeastern System, Ft. Worth & Denver City R'y, Frisco System Lines—Ft. Worth & Rio Grande R'y, Red River, Texas & Southern R'y, St. Louis & San Francisco R. R.; Gulf Colorado & Santa Fe R'y, Houston & Texas Central R. R., Houston, East & West Texas R'y, International & Great Northern R'y, Kansas City Southern R'y, Missouri, Kansas & Texas R'y System, Missouri Pacific—Iron Mountain System, San Antonio & Arkansas Pass R'y, St. Louis Southwestern R'y System, Southern Pacific Co., Texarkana & Ft. Smith R'y, Texas & Pacific R'y, Texas Midland R. R.

ONE AND ONE-THIRD FIRST-CLASS FARE

Including Ohio, Michigan (except Northern Peninsula), and Indiana, and part of Illinois in the Central Passenger Association Territory

FIRST MEETING	**Dates for Buying Tickets—August 6, 7, 8, 9, 10, 11 and 12** **Dates for Returning Home—August 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 and 20**
SECOND MEETING	Dates for Buying Tickets—August 20, 21, 22, 23, 24, 25 and 26 Dates for Returning Home—August 24, 25, 26, 27, 28, 29, 30, 31, Sept. 1, 2 and 3
THIRD MEETING	Dates for Buying Tickets—September 3, 4, 5, 6, 7, 8 and 9 Dates for Returning Home—September 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 and 17
FOURTH MEETING	Dates for Buying Tickets— October 29, 30, 31, November 1, 2, 3 and 4 Dates for Returning Home—November 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12

Make a note of the dates for buying tickets and returning home. The railroads will positively permit no deviation from the dates given above.
Members must in all cases **take certificates** [not a receipt] from the ticket seller at the point of starting.

WARNING! The dates given above only are correct, and the Association cannot be responsible for any statements of railroad employees to the contrary.

Write us for additional particulars. Make our stores your headquarters. We are at your service.

OTTO YOUNG & CO. 149-153 State Street
Wholesale Diamonds, Watches and Jewelry

BENJ. ALLEN & CO. Silversmiths' Building
Diamonds, Watches and Jewelry at Wholesale

C. H. KNIGHTS & CO. Columbus Memorial Building
Diamond Merchants and Wholesale Jewelers

STEIN & ELLBOGEN CO. 103 State Street
Diamond Cutters and Wholesale Jewelers

F. A. HARDY & CO. Silversmiths' Building
Wholesale and Manufacturing Opticians

A. C. BECKEN Powers Building
Wholesale Diamonds, Watches and Jewelry

PITKIN & BROOKS State and Lake Streets
Cut Glass, Fine China and Lamps

H. F. HAHN & COMPANY Powers Building
Diamonds, Watches and Jewelry

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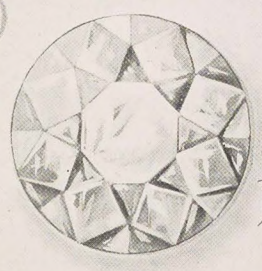

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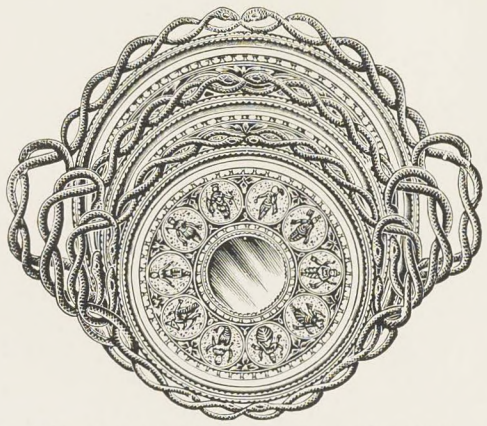

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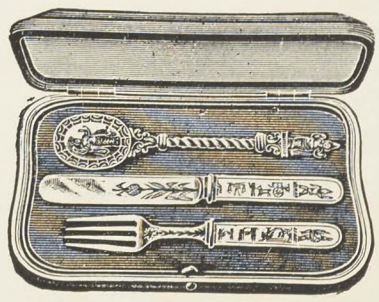
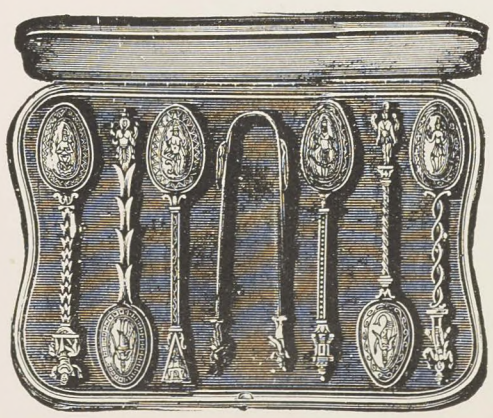


5730. Knife, Fork and Spoon



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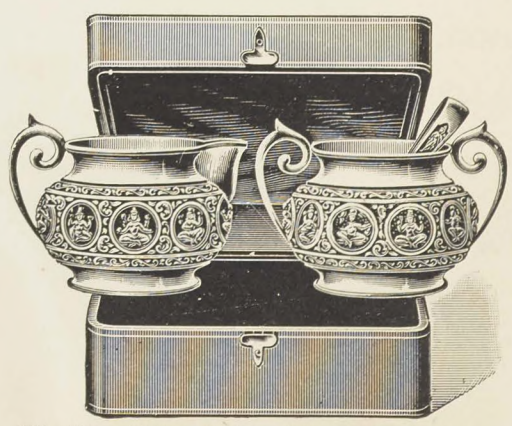
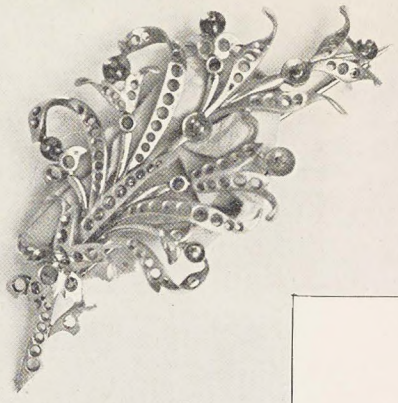
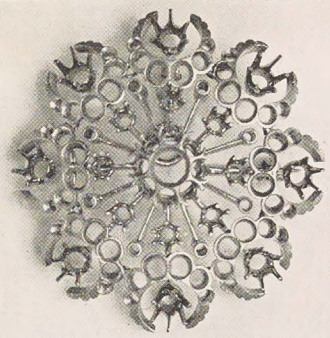


5710. "Swami" Sugar Basin and Cream Jug, with Tongs, in best Morocco case

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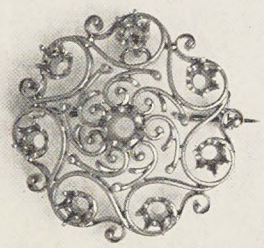
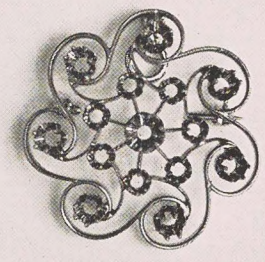

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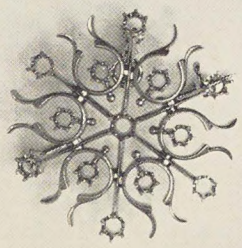
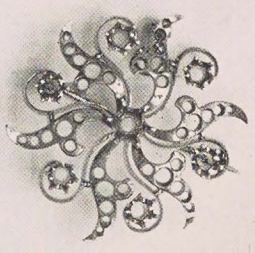

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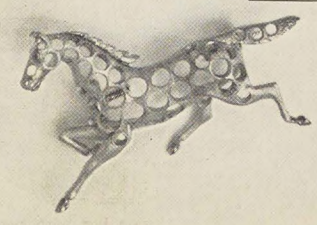

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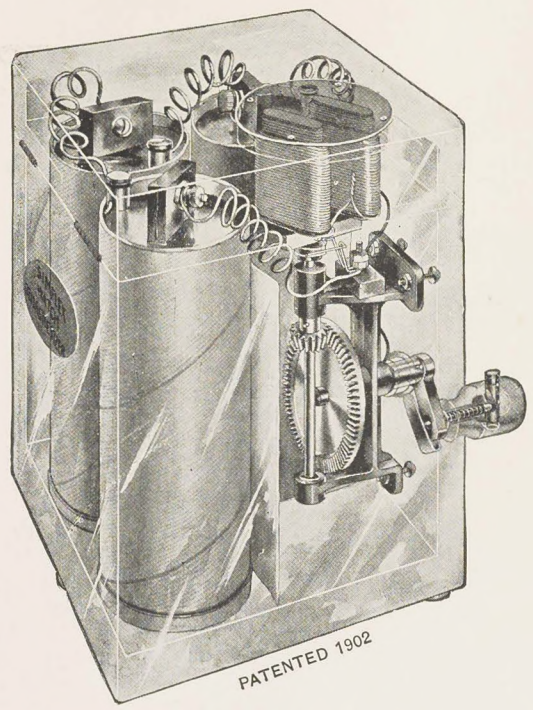

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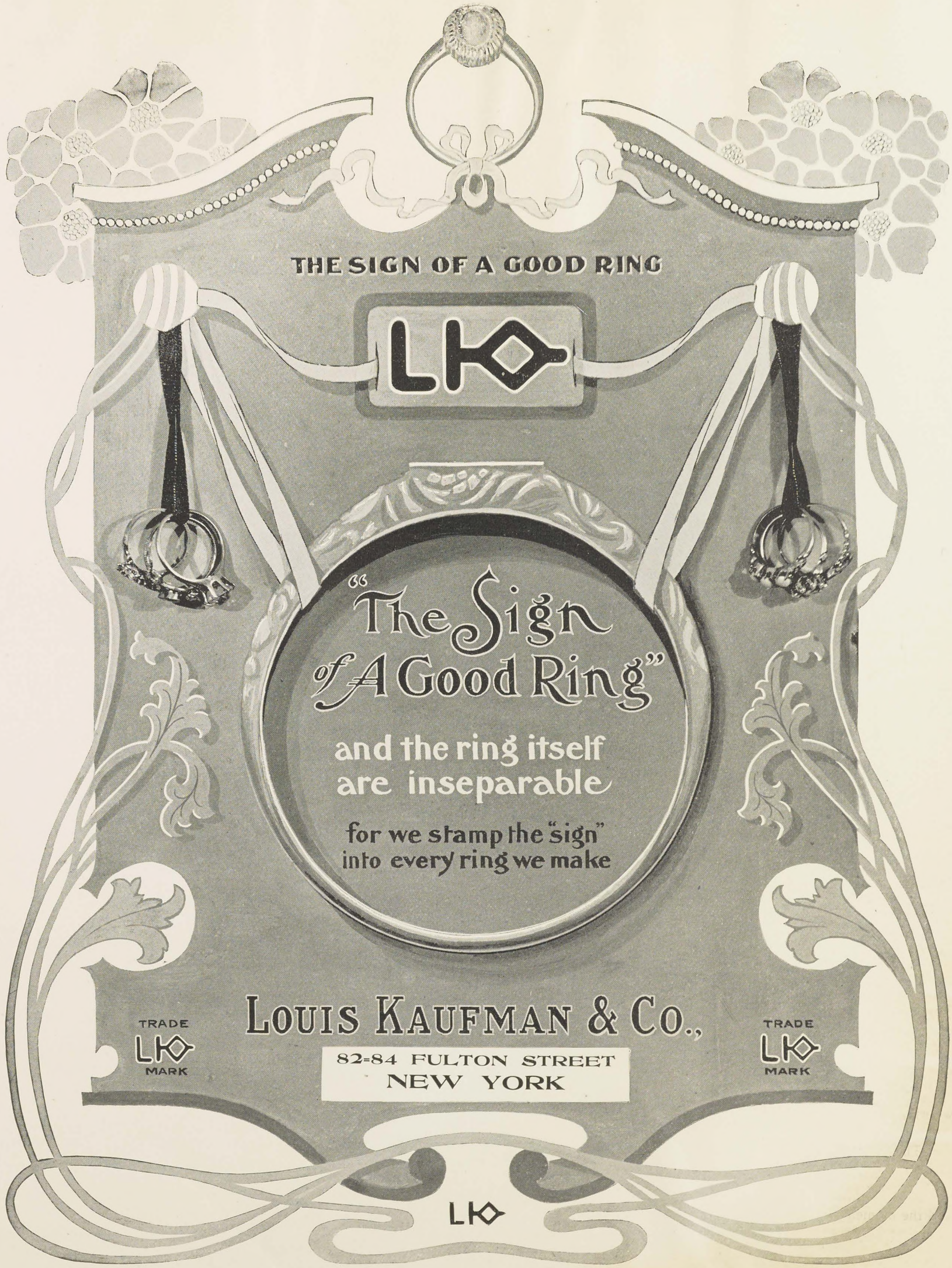
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TECHNICAL DEPARTMENT

Lessons in Horology

COURSE IN MECHANICS AS APPLIED TO CHRONOMETRY

By JULES GROSSMANN, Director of the Horological School, of Locle, Switzerland, and HERMANN GROSSMANN, Director of the Horological and Electro-Mechanical School, of Neuchatel, Switzerland.

Authorized translation by JAMES ALLAN, JR., Charleston, S. C. Former pupil of the Locle Horological School.

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(Continued. Part X.)

This arrangement permits of the complete equalization of the motive action of the spring. In effect, when one has just wound the watch, the spring is completely coiled ; a steel chain, one end of which is hooked to the fusee and the other to the barrel, is at this moment almost completely wrapped around the spiral lines of the axis of the fusee. On unwinding itself, the spring turns the barrel, which communicates its movement to the fusee by the intermediary of the chain. This unwraps itself, little by little, from the fusee, and wraps around the barrel until there remain no more turns on the fusee. It is evident that if the tension of the spring continually diminishes, this action works in the contrary sense, always at a greater distance from the axis of the fusee. The motive work, product of the tension by the distance traversed, gives, designating the tension by P, the distance to the axis by r and the speed of rotation by w,

$$P\ r\ w.$$

This work should be constant if the speed of the wheel fixed on the axis of the fusee is constant, that is to say, if there is a uniform angular speed, and the fusee is grooved in such a manner that the product $P\ r$ remains constant. The variations of P must then be the reverse of those of r. An exception, however, must be made to the preceding, if one takes into account the friction of the pivots in the plates ; this friction, in fact, diminishes constantly as the pressure diminishes. We will, however, neglect this factor, in order not to complicate the following theory.

114. To determine practically whether or not the variation of the force of a spring is exactly counterbalanced by the form of the fusee, one uses a lever and a weight, as we have seen before (81) ; one fixes the lever on the square of the arbor of the fusee ; the form of this piece will be exact if the weight carried by the lever makes equilibrium with the force of the spring at the same distance from the axis for each point of the successive rotations of the fusee.

115. Calculation of the Variable Radius of the Fusee's Helix. Let

R, be the interior radius of the barrel, half the thickness of the chain being included therein ;

r, the variable radius of the fusee ;

r_0, its initial radius (in r and r_0 is also included half the thickness of the chain) ;

θ, the maximum angle which the spring is wound, starting from the position where the elastic effect is null, and corresponding to the instant when the chain acts at the extremity of the radius r_0 ;

α, the angle which the barrel has turned, starting from the position θ ;

β, the angle which the fusee has turned, starting from the instant when the chain acts at the extremity of the radius r_0.

The moment of the force of the spring can be expressed by

$$F = \frac{\frac{1}{12}\ E\ e^3\ h}{L}\ (\theta - \alpha).$$

Placing

$$\frac{\frac{1}{12}\ E\ e^3\ h}{L} = M$$

we will have

$$F = M\ (\theta - \alpha).$$

The force F' acting at the exterior of the barrel should be

$$F' = \frac{M}{R}\ (\theta - \alpha),$$

and the moment F_1 with relation to the axis of the fusee is

$$F_1 = \frac{M\ r}{R}\ (\theta - \alpha).$$

The values of r and of α should vary in such a manner that, in order that F_1 may be constant, we should have α equal to zero for r equal to r_0 ; we will then have

$$\frac{M\ r_0}{R} = \frac{M\ r}{R}\ (\theta - \alpha),$$

whence

$$(1) \qquad r = \frac{r_0\ \theta}{\theta - \alpha}.$$

When the chain wraps up an infinitely small quantity, $R\ d\ \alpha$, on the barrel, it unwraps the same length, $r\ d\ \beta$, from the fusee. One has then

$$R\ d\ \alpha = r\ d\ \beta,$$

but, because of the equation (1),

$$d\ \beta = \frac{R}{r_0\ \theta}\ (\theta - \alpha)\ d\ \alpha.$$

On integrating, it becomes

$$\beta = \frac{R}{r_0\ \theta} \int (\theta - \alpha)\ d\ \alpha = \frac{R}{r_0\ \theta} \left(\int \theta\ d\ \alpha - \int \alpha\ d\ \alpha \right).$$

These integrals should be taken between the limits $\alpha = 0$ and $\alpha = \alpha'$, one will have

$$\int \theta\ d\ \alpha = \theta\ \alpha \text{ and } \int \alpha\ d\ \alpha = \tfrac{1}{2}\ \alpha^2 ;$$

consequently,

$$\beta = \frac{R}{r_0\ \theta} (\theta\ \alpha - \tfrac{1}{2}\ \alpha^2).$$

Drawing from this equation the value of α one will have first

$$-\tfrac{1}{2}\ \alpha^2 + \theta\ \alpha = \frac{r_0\ \theta}{R}\ \beta ;$$

changing the signs, adding θ^2 to each member and multiplying by 2, it becomes

$$\alpha^2 - 2\ \theta\ \alpha + \theta^2 = -\frac{2\ r_0\ \theta}{R}\ \beta + \theta^2,$$

and

$$\alpha - \theta = \pm \sqrt{\frac{2\ r_0\ \theta}{R}\ \beta + \theta^2} ;$$

consequently,

$$\alpha = \theta \pm \theta \sqrt{1 - \frac{2\ r_0}{R\ \theta}\ \beta}.$$

Replacing now in equation (1) α by this value, we will obtain

$$r = \frac{r_0\ \theta}{\theta - \theta \pm \sqrt{1 - \frac{2\ r_0}{R\ \theta}\ \beta}},$$

or

$$r = \frac{r_0}{\sqrt{1 - \frac{2\ r_0}{R\ \theta}\ \beta}}.$$

Placing $\theta = 2\ \pi\ n$ and $\beta = 2\ \pi\ n'$ we will have, finally,

$$(2) \qquad r = \frac{r_0}{\sqrt{1 - \frac{2\ r_0}{R}\ \frac{n'}{n}}}.$$

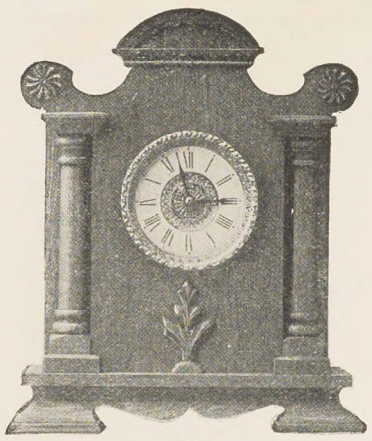
116. Numerical Calculation of the Preceding Equation. Let $R = 8$ mm., $r_0 = 5$ mm., $\theta = 12 \times 2\ \pi$ and let us calculate first the value of the radius r for an angle $\beta = 2\ \pi$; we will write, on replacing values,

$$r^1 = \frac{5}{\sqrt{1 - \frac{2 \times 5}{8 \times 12}}} = \frac{5}{\sqrt{1 - \frac{10}{96}}},$$

the calculation gives :

Log : 86	= 1.9344985	Log : 5	= 0.6989700
— log : 96	= 1.9822712	$-\log : \sqrt{\frac{86}{96}}$	= 0.9761136
	1.9522273 — 2	Log : r^1	= 0.7228564
$\text{Log} : \sqrt{\frac{86}{96}}$	= 0.9761136 — 1	and r^1	= 5.2827 mm.

(*Continued on page* 1603)



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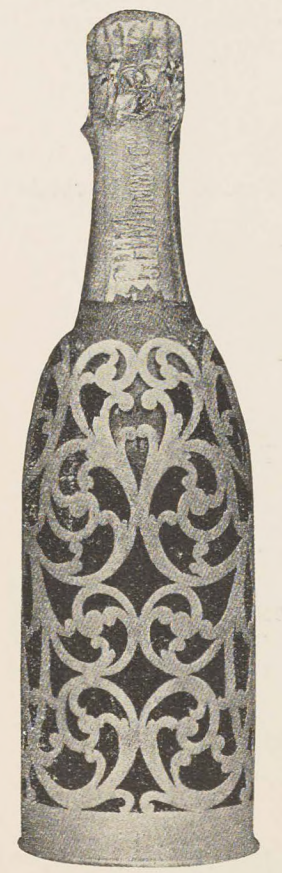

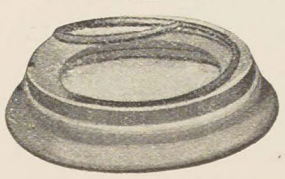

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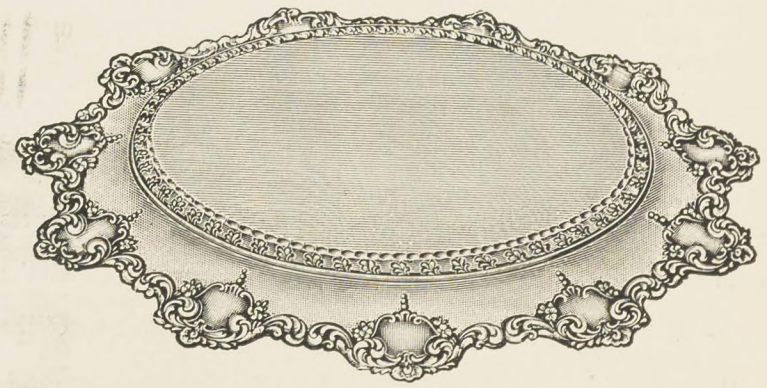

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Lessons in Horology

(*Continued from page* 1601)

Successive calculations will give us in an analogous manner the following results, which we group in a table :

For $\beta = 2\pi$,	$r' =$	5.2827.
" $\beta = 4\pi$,	$r'' =$	5.6195.
" $\beta = 6\pi$,	$r''' =$	6.0302.
" $\beta = 8\pi$,	$r'''' =$	6.5491.
" $\beta = 10\pi$,	$r''''' =$	7.2231, etc.

117. Other Calculations. It more often happens, in practice, that one is given the greatest radius of the fusee, and that the question is to determine the variable radius, starting from this value. This problem, the inverse of the preceding, is solved in an analogous manner. Preserving the same notations as in the preceding case, let r_0 in this case be the greatest radius of the fusee and θ the angle which the spring is set up at the instant when the chain acts at the extremity of the radius r_0 of the fusee. We have the moment of the force of the spring :

$$F_0 = M\theta,$$

and in the initial position, when the barrel has turned an angle α,

$$F = M(\theta + \alpha).$$

The force F' acting at the exterior of the barrel will be for the two cases :

$$F'_0 = \frac{M}{R}\theta \text{ and } F' = \frac{M}{R}(\theta + \alpha),$$

and the moment of these forces with relation to the axis of the fusee will be :

$$F''_0 = \frac{M r_0}{R}\theta \text{ and } F'' = \frac{M r}{R}(\theta + \alpha).$$

Making these two values equal, one has

$$\frac{M r_0}{R}\theta = \frac{M r}{R}(\theta + \alpha),$$

or

$$r_0\,\theta = r(\theta + \alpha),$$

from whence one extracts

$$(1) \qquad r = \frac{r_0\,\theta}{\theta + \alpha}.$$

As in the preceding case, we place

$$r\,d\beta = R\,d\alpha,$$

from whence

$$d\beta = \frac{R}{r}\,d\alpha.$$

Replacing r by its value (1), one obtains

$$d\beta = \frac{R}{r_0\,\theta}(\theta + \alpha)\,d\alpha,$$

and on integrating,

$$\beta = \frac{R}{r_0\,\theta}\left(\int \theta\,d\alpha + \int \alpha\,d\alpha\right),$$

from whence

$$\beta = \frac{R}{r_0\,\theta}\left(\theta\,\alpha + \tfrac{1}{2}\alpha^2\right).$$

Transformations analogous to the preceding case will give us successively :

$$\tfrac{1}{2}\alpha^2 + \theta\,\alpha = \frac{r_0\,\theta}{R}\beta,$$

$$\alpha^2 + 2\theta\,\alpha + \theta^2 = \frac{r_0\,\theta}{R}\beta + \theta^2,$$

$$\alpha + \theta = \sqrt{2\,\frac{r_0\,\theta}{R}\beta + \theta^2},$$

$$\alpha = -\theta \pm \sqrt{2\,\frac{r_0\,\theta}{R}\beta + \theta^2},$$

$$\alpha = -\theta \pm \theta\sqrt{\frac{2\,r_0}{R\,\theta}\beta + 1}.$$

The value of α, extracted from the equation (1), is equal to

$$\alpha = \frac{r_0}{r}\theta - \theta,$$

consequently,

$$\frac{r_0}{r}\theta - \theta = -\theta \pm \theta\sqrt{\frac{2\,r_0}{R\,\theta}\beta + 1},$$

and

$$\frac{r_0}{r}\theta = \pm\theta\sqrt{\frac{2\,r_0\,\beta}{R\,\theta} + 1},$$

from whence

$$r = \frac{r_0}{\sqrt{\frac{2\,r_0\,\beta}{R\,\theta} + 1}};$$

or still further, by substituting $\beta = 2\pi n'$ and $\theta = 2\pi n$,

$$(2) \qquad r = \frac{r_0}{\sqrt{\frac{2\,r_0}{R}\,\frac{n'}{n} + 1}}.$$

118. Numerical Calculation of the Preceding Equation. As an example of the application of the preceding calculation, let us determine the dimensions of a marine chronometer's fusee and let the following be the data :

Exterior radius of the barrel including half the thickness of the chain, ... $R = 21.7$ mm

Maximum radius of the fusee, ... $r_0 = 18.3$ mm.

Development of the spring, ... $n = 3.4$ turns.

Let us admit, that when the spring is set up one turn, the chain acts on an angle $\beta = 0$, in this case then

$$n' = 0.$$

When the fusee has made one turn, we then will have $n' = 1$, and on replacing the letters by their values in the formula (2), we will have

$$r = \frac{18.3}{\sqrt{\frac{2 \times 18.3 \times 1}{21.7 \times 3.4} + 1}}.$$

The calculation gives

Log : (2×18.3) = log : 36.6 = 1.5634811
$-$log : (27.7×3.4) = 1.8679386
0.6955425 $-$ 1
Corresponding number = 0.4961

Log : 21.7 = 1.3364597.
$+$log : 3.4 = 0.5314789.
1.8679386.

$$\text{Log} : \sqrt{0.4961 + 1} = \frac{\log : 1.4961}{2}$$

Log : 1.4961 = 0.1749606
log : $\sqrt{1.4961}$ = 0.0874803

Log : 18.3 = 1.2624511
$-$ 0.0874803
1.1749708
Number = 14.961

We will then have the radius of the fusee for a number of turns $n' = 1$:

$$r_1 = 14.961 \text{ mm.}$$

Replacing, successively, in the preceding formula n' by 2, 3, 4, etc., one will arrive at the following results :

For $n' = 0$,	$r_0 =$	18.3
" $n' = 1$,	$r_1 =$	14.961
" $n' = 2$,	$r_2 =$	12.965
" $n' = 3$,	$r_3 =$	11.601
" $n' = 4$,	$r_4 =$	10.593
" $n' = 5$,	$r_5 =$	9.809
" $n' = 6$,	$r_6 =$	9.177
" $n' = 7$,	$r_7 =$	8.653
" $n' = 8$,	$r_8 =$	8.21

119. Uniformity of the Spring's Force in Fusee Watches. In order to obtain perfect uniformity of the spring's force in fusee watches, it is not sufficient alone to construct the fusee in a manner conformed to the data of the preceding calculations. There are other factors which must be taken into account, and about which we will give some explanations.

(TO BE CONTINUED)

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The remark has been frequently made that we do not know how to figure goods and are selling them at cost. These are the sort of lobsters the trade is looking for. We have kept them guessing for several years and propose to continue to keep them guessing.

Just ask your jobber for the chains that have more gold on them than any other make and they will show you S. O. Bigney & Co.'s high-grade gold filled chains.

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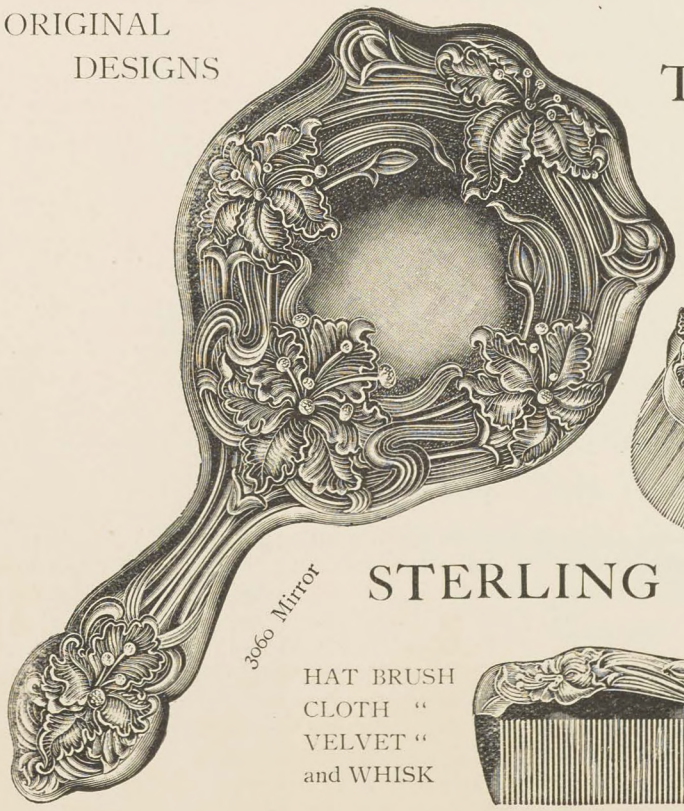
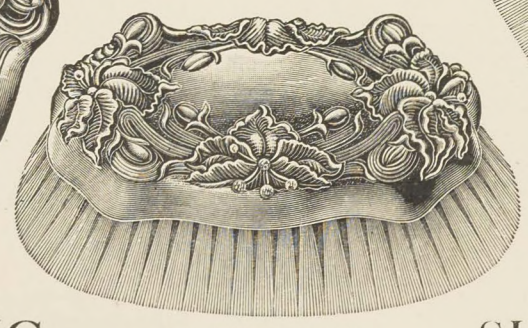


3060 Mirror



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HAT BRUSH
CLOTH "
VELVET "
and WHISK

3060 Comb

BUFFER
NAIL BRUSH
and
BONNET BRUSH
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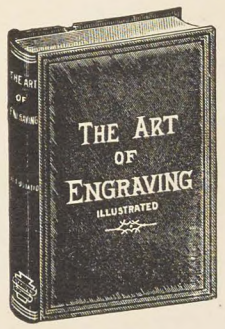

THE ART OF ENGRAVING

To fill one of the chief wants of the trade in technical instruction we have compiled this serial, which will be continued monthly till completed. It is the most complete treatise ever written on this subject, being wider in scope and more copiously illustrated than any previous work on engraving. Those who desire the entire serial at once may procure same in book form, a handsome volume, bound in silk cloth, containing over 200 pages and 216 specially executed illustrations. A copy of the book will be sent postpaid to any part of the world on receipt of price, $1.50 (6s. 3d.)

(Continued. Part XX. Begun in March, 1903)

At *A*, Fig. 79, we illustrate the vertical script of the looped style and at *B* the back-hand script of the same style, showing the student that the looped style of script is appropriate for either vertical or back-hand style.

The Practical Use of Script Letters

One of the most troublesome features connected with the art of engraving is the danger of the point of the graver breaking off. If the engraver selects a tool of the best quality and sharpens it correctly, he will experience little difficulty of this kind. How to obviate the point of the graver breaking off is a question which puzzles a great many beginners in the art of engraving. It should be stated in this connection that the angle on which the graver is sharpened on the front should be varied according to the condition

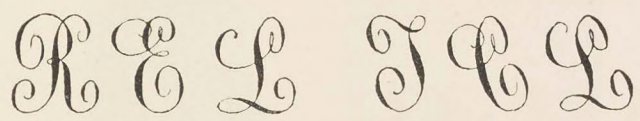

Fig. 79

of the metal to be cut. If we are cutting on very hard metal, such as plated teaspoons, the angle on the front of the graver should be more blunt than it would be if we were cutting Britannia metal. Fourteen karat gold will be found of such alloy as to make it difficult to cut it and not break the point of the graver, and this is especially true if the point of the graver is left rough, in the condition in which it comes from the oilstone, which is the condition of the graver when used on a polished surface.

The engraver should remember that in cutting satin finish, Roman gold finish, French gray finish, or oxidized silver, that he should use a polished graver. In nearly all other finishes the graver should be left in the condition in which it comes from the oilstone, in which condition it will cut a ragged line. The term "ragged line," as here used, does not mean that the extreme edges of the letter will be rough or irregular, but the incision will appear to be composed of a series of fine lines, due to the condition of the cutting edge of the graver, which has been thoroughly described in instructing the student how to grind and polish a graver. It will be found more difficult to cut with the graver in this condition possibly than it would if it were polished a very little. If the oilstone, which the engraver uses, is a very coarse one, then it would be necessary to polish the graver a very little in order to reduce the roughness to a minimum, but not enough to make it cut bright. If in cutting with a rough graver it is found that it grinds and grates as it is pushed forward, and the operator is sure that the angles are exactly flat, he will be able to wield the graver easier if he lubricates it with saliva by putting the point of the graver between his lips at each insertion. This is a bad habit to form and should be resorted to only in cases where it is necessary.

At Fig. 80 we illustrate four hearts, showing the different ways in which initials, names and figures can be engraved. Of course, it would be practical, and possibly easier, to engrave the letters straight across or straight up on an angle. It will be seen that a few little scrolls above or below the letters will add to the artistic effect.

Fig. 80

At Fig. 81 we illustrate a locket with the word "Laura" engraved thereon, showing how the looped style of script, with a little ornamental work above and below a word, adds to its beauty. It is not more difficult to engrave a word in this way than it would be to engrave it perfectly plain, and the artistic effect gained by doing it in this way is such that it is advisable for the student to make the attempt.

Fig. 81

At Fig. 82 we illustrate two different styles of engraving teaspoon handles. At *A* we illustrate the word "Ethelind," designed ready for engraving.

Fig. 82

The most difficult feature in designing a word on a spoon handle is to sketch it so that the general effect of the word will be in the center of the space allotted to the word. This is accomplished in designing a spoon handle, as here illustrated, by first drawing a line from the center of the end of the handle to the center of a point on the handle just at the right of the beginning of the word. The central point at the end of the handle engraved "Ethelind" shows where such a line may begin. Now, as to whether or not this line should come exactly at the top of the lower-case letters or slightly below depends altogether upon the number of letters coming above the lower-case guide line.

In the case of the word in question we have five letters coming above the lower-case guide line. It is, therefore, necessary that this center guide line should be the top guide line of the lower-case letters. While, on the other hand, if we had some letters coming above the line and some letters coming below the line, these conditions would be changed to such an extent that it would be necessary for the center line to pass through the top of the letters about one-fourth the distance down from the top of the lower-case guide line. A beautifully engraved word on a spoon or fork handle not properly placed, is more irritating to an artistic eye than one properly located of the right size if not so well engraved. Therefore, the student is especially cautioned in regard to this, and advised to practice this particular point diligently. There are too many ways of using script letters to illustrate all. We therefore present for the consideration of the student only a few, which will suffice to give him an idea of how the work should be accomplished.

Fig. 83

At Fig. 83 we illustrate an ornamental handle of a spoon or fork with initials B. C. S. designed thereon, showing how the letters could be designed in such a space. The student should endeavor to so educate his eye as to arrange the style of letters and shape of same to as far as possible correspond with the style of the article to be engraved.

Fig. 84

At Fig. 84 we illustrate a match box, showing how it can be engraved in plain script on a straight line, yet on an angle, diagonally across the box, which is far better than engraving it straight across or perpendicularly. The location of the date is also preferable to having it directly under the name, unless the customer should request otherwise.

At Fig. 85 we illustrate a pin tray with the word "Florence" engraved thereon. In a case of this kind the engraver must first find the center of the dish and then the same instructions apply as in the case of a spoon handle, shown at Fig. 82. Great care should be exercised in a case of this kind in reference to the size of the letters. If the letters are engraved too large and are not appropriately shaded for the size, or too small and too heavily shaded, they will look wrong. The student should carefully study a design after he has placed it on the article and see if it is the right size.

Fig. 85

(TO BE CONTINUED)

New Milestone in Chain Manufacture

HAMILTON & HAMILTON, JR.

BRANCH OFFICES

New York City, 3 Maiden Lane
Chicago, Ill., 402 Stewart Building
San Francisco, 307 Claus Spreckels

Works: Providence, R. I.

About Mainsprings

Article No. 43 of the serial entitled "Cleaning and Restoring," begun in the April, 1901, issue of THE KEYSTONE.

PERHAPS it may be well to add to what we said about the friction safety action as a substitute for stop-works, that the thick steel band *F*, article No. 42, is not permanently attached to the mainspring, but supposed to be a detachable part of the barrel. It now comes to practically arranging our barrel, so as to employ it in a watch—our new model watch. This movement is supposed to be a ¾ plate, and 16 size. We advocate the use of ¾ plate movements from several reasons, not least among which is placing the balance in such a position that a squeeze or pressure on the case will not upset the balance pivots. Another good reason is, we get a thinner movement than when we employ a full plate. Too thin a movement, however, is no more to be desired than one too thick.

More About the New Movement

For convenient talking, we we will assume that our movement will average about the same thickness as an Elgin No. 290. Inasmuch as our main wheel and arbor are entirely detached from the barrel, except through the mainspring, we can arrange our train so as to have it (the main wheel) come above or below the center wheel. As many of the features of this movement will be novel and on lines departing in a marked degree from old models, we can introduce many innovations; for instance, the main wheel above the center wheel, will permit us to use for this an open wheel; that is, one with arms; true, we could do this as well if we placed the center wheel above the main wheel. The chief objection offered to placing the main wheel above the center, is excessive friction on the lower bearing of the center.

This objection can, however, be very well overcome by making the pivot hole to the center wheel pretty deep, and as to size in diameter it need not be as large as the ordinary Swiss watch, which sets from the back. The idea of this barrel is, it turns on bearings *n m* in the main plate. The center pinion is shown at *N*, with its pivot at *I*. The upper jewels for the pivots *a I* are in a bridge, placed very much as we now often see in ¾ plate watches. The main plate for our watch is much thicker than is ordinarily used in American movements, to allow for the recess in which the barrel *B* is placed. The recess for the barrel is made from the dial side of the main plate.

The use of such very thick lower plate avoids the use of any pillars. In the cut at Fig. 1 the dotted lines *c c* and *d d* represent the top and bottom of the main plate. The dotted lines *f f* represent the sink in which the barrel *B* rests. This sink is closed by the plate *H*, which rests in an offset shown at the dotted lines *e e*. The lower pivot *b* is jeweled in an extra plate shown at *G*. It will be seen that the flange or bearing *m* on the barrel *B* leaves a recess nearly of the size of the mainspring nut *C*, into which the jewel for the pivot *b* can run. The mainspring nut *C* goes on *D* with a screw.

It is not necessary that the barrel *B* should turn in the recess in the plate *F* perfectly free, as a little friction in the plate will do no especial harm, except to make the winding a little harder. The only exception to this form of winding which can be urged, is that it is a little thick, but if carefully made, will be no thicker than the ordinary

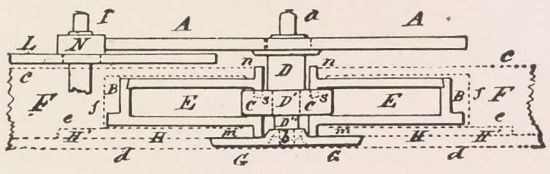

Fig. 1

American 16 size ¾ plate. We will in our next article describe a winding similar to the Howard; but which, we think, is free from some objections which we hold can be urged against this form of barrel.

Equalizing Barrel Frictions

The writer insists that whatever form of barrel is employed, the frictions arising from running down should be alike above and below the spring. What is meant by this is to arrange the barrel or receptacle for the mainspring in such a way as to have the mainspring frictions as near equal as possible. Any person can readily understand, that if we employ a barrel open on one side so that one edge of the mainspring rubs on the main wheel, and the other on the fixed immovable main plate, the frictions must be variable, and more or less influence the running of the watch. For this reason we require a barrel to enclose the spring. It is evident, by the arrangement we propose, that we can employ the lightest possible train consistent with sufficient strength to convey the power of the mainspring to the escapement and stand the handling of more or less unskillful workmen in cleaning. It is an old theme, but we cannot refrain from speaking of the great importance of a light train. A moment's thought will show us that for every tick of a watch, the entire train has to make two movements: (*a*), backward or retrograde when the tooth unlocks; (*b*), a forward movement to convey the requisite power to the balance; and we must further understand that these two movements take place in less than $\frac{1}{30}$ of a second. The thought will, of course, occur to those who have not given the subject much attention, that the entire duration of the beat of a balance beating 18,000, is $\frac{1}{5}$ of a second; but it must be borne in mind that the balance comes to an entire rest during this interval, and that the balance at the time the pallet is unlocked and the impulse given, is moving with its greatest velocity. [TO BE CONTINUED]

The Telephone Ear

"Did you know this telephone business has resulted in a telephone ear?" said a clerk whose work called him constantly to the telephone. "I don't mean that our hearing is injured, but that the left ear becomes more keen than the right. If you'll notice, all the telephones are left-handed. That is, the instruments are so placed that we hold the receiver with the left hand, so that we may have the right hand free to use in taking notes of messages, I presume. Of course, one naturally claps the receiver to his left ear, as it would be almost impossible to twist it around to his right ear. Consequently, the left ear becomes gradually much sharper in catching sounds than the right ear. If you don't believe it, just try holding the receiver in your right hand some time and use your right ear. You'll find that conversation which was perfectly distinct to the left ear, sounds confused and muffled to the right, and there is a distinct effort to understand. It is simply that the left ear is a trained telephone ear, while the right ear is not."

Plating on Aluminum

A method has been invented, in England, for plating on aluminum, an achievement which has long been striven for with little success. The chief difficulty seems to arise from an invisible film which forms on aluminum when exposed to air. By the new method this film is dissolved off in a bath containing soluble fluorides. A little free hydrofluoric acid appears to work best. Then a coating of zinc is formed on the aluminum in a plating bath, and upon this coating copper, silver and other metals may be deposited. In order to form a gold plating the zinc covering the aluminum must first be coated thinly with copper, as otherwise the gold sinks into the zinc, and in a few weeks almost disappears.

Red Sea Pearls

Pearl fisheries, of which the world hears little, but which constitute a considerable industry, are carried on at the Lohia Islands, in the lower end of the Red Sea. Very few of these pearls find their way to European or American markets, because the local demand almost absorbs the output. Pearls, says United States Consul Masterson at Aden, are the most popular of all gems among the inhabitants of India and Arabia, and it is seldom that a native woman of any social position is seen without pearl ornaments of some kind, either finger rings, earrings or rings for the nose, and even the feet. All the pearls from the Persian Gulf are sent to Bombay.

AND

THE BASSETT CHAIN STILL LEADS ALL THE REST!

The following was the result of the August assays as shown in "The Goldsmith and Silversmith"

This list of United States Government assays was made, of course, without reference to who it would hit or benefit. NUMBER 163 WAS A CHAIN MADE BY THE BASSETT JEWELRY COMPANY and the figures show that it contained more gold than the chains of any of the other nine makes that were tested, while the price was less than that of all except one on the list, and that was the chain containing the least gold of any in the bunch.

1-10 Gold Filled Watch Chains, Minus Bar and Swivel

No.	Cost	Gross Weight Decimal Ounces	Fineness Gold 1000ths	Value of Gold
160	$2.00	.83	18	$ .31
162	2.54	.53	60	.66
163	**2.41½**	**.68**	**49¾**	**.70**
161	. . . . .	.61	40¾	.51
164	2.50	.81	34½	.58
175	2.35	.65	30¼	.40 6/10
173	2.59	.89	22¼	.41
174	3.58	.63	45	.59
185	2.63⅓	.81	29	.49
186	2.64½	.83	29	.50

1-4 Gold Filled Watch Chains, Minus Bar and Swivel

No.	Cost	Gross Weight Decimal Ounces	Fineness Gold 1000ths	Value of Gold
187	**$4.50**	**.58**	**125½**	**$1.51**
188	4.75	.39	125¾	.99
189	5.25	.57	133¼	1.57

As for the 1-4 GOLD FILLED CHAINS, No. 187 was also a Bassett Chain. The reader can see the result of both assays for himself.

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Manufacturers of Chains and Jewelry

The Manufacturers' Building, Providence, R. I.

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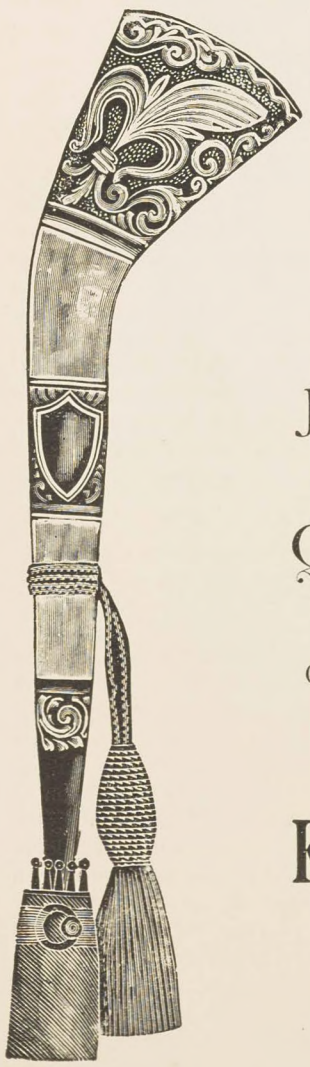

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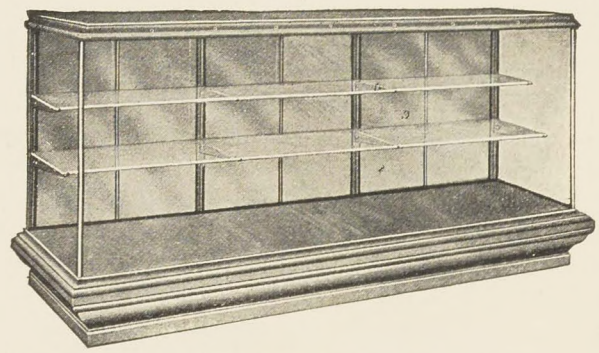

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P. S.—We make the best line of out-door cases in America

Compound Gasoline Vapor and Air Furnace

Article No. 48 of the serial entitled "Gold Working," begun in the November, 1900, issue of THE KEYSTONE.

THE gasoline vapor generator described in article No. 47, does not discharge its vapor directly into the chamber of the furnace, but the vapor is mingled with air and then injected into the furnace. It is a fact worth remembering in regard to explosive mixtures of air and gas or petroleum vapors, that the combination or explosion does not take place instantly, but requires an appreciable time. We can best explain this part by reference to the cut at Fig. 1. Let us imagine the tube *A* to be

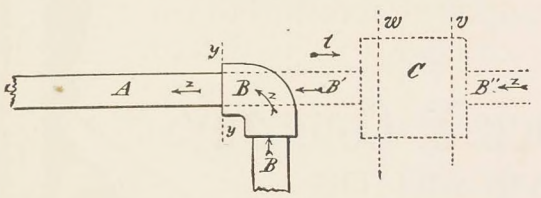

Fig. 1

filled with a mixture of gasoline vapor and air in the best proportions to explode, which, as we have explained, means only to burn very rapidly. Any mixture of air and such vapor, varying from 6 of air to 1 of vapor, to 16 of air to 1 of vapor, will explode; but the strongest explosive mixture is about 10 of air to 1 of vapor.

To resume our explanation: let us first suppose the tube *A* to be filled with an explosive mixture of gasoline vapor and air to line *y*. If now we should apply a lighted match to the end *x* of the tube *A*, the flame kindled would proceed back toward *y* so rapidly and with such violence as to be called an explosion. But we can arrange to have the vapor and mixture driven through the tube *A* with such rapidity that it will only burn outside.

To Prevent Explosions

To prevent accidents arising from the flame passing inside the generator, we must provide a special chamber through which the gasoline vapor passes. Such chamber is only an enlargement of the supply tube which carries the gasoline vapor to the burner or combustion chamber. In explanation, let us suppose the supply pipe *B*, Fig. 1, instead of turning with an elbow as shown at the full lines, should be a straight pipe with an enlarged chamber at *C*, as shown in the dotted outlines. At Fig. 2 we show an end view of a vertical section of Fig. 1 on the line *w*, and as if seen in the direction of the arrow *t*. All there is of this chamber is that we have taken a piece of tube of

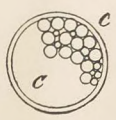

Fig. 2

about twice or thrice the diameter of *B* and placed it so the gasoline vapor all has to pass through it. To make this chamber act as a check to the advance of flame, we fill it with pieces of wire as shown at Fig. 2. To give details, suppose the supply pipe *B' B''* to be ⅜″ internal diameter, we would make the chamber *C'* from ¾″ to 1″ internal diameter and say 1½″ to 2″ long—although the length has but little to do with it. The interior of the chamber *C* between the lines *w v* is packed with pieces of about No. 20 wire.

In filling in such a tube there will crevices occur, which are larger than should be left open, and still too small to take a No. 20 wire. In such interstices insert a bit of smaller wire. The idea is we do not wish to have any apertures which will exceed $\frac{1}{64}$″ in diameter, as it is a law in combustion that a flame will not pass through an aperture of this or less diameter. By placing such a chamber as *C* in the supply pipe between the vapor generator and the furnace, all danger of blowing up the generator is avoided. The chamber *C* should be as close to the burner as construction will allow.

We show at Fig. 3 the details of the arrangement for a vapor generator and air

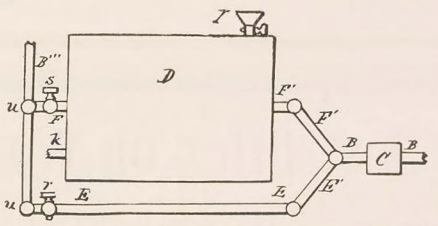

Fig. 3

pipes. The pipe *B'''* leads to the blower, and it will be seen that it divides at *u* into the pipes *F E*, the pipe *F* passing into the generator *D*, while the pipe *E* passes outside.

Regulating the Ratio of Gasoline Vapor and Air

Now, it will be seen that by means of the cocks *r s* we can perfectly regulate the ratio of gasoline vapor to the air. There is another method of constructing a vapor burner, which in some respects is to be preferred. The plan on which this is constructed is illustrated at Fig. 4. In this plan the burner is placed in the bottom of the furnace, as shown at Fig. 2, article No. 47. In this last-named arrangement the gasoline vapor or gas, if gas is used, is led by the pipe *E* to the open tube burner *G*. This open tube should be about 1″ inside diameter and 2″ long. The bottom of the tube *G* is closed with an iron disk, shown at *b*.

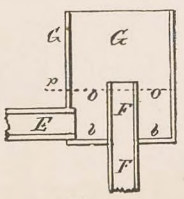

Fig. 4

All the parts shown at Fig. 4 can best be of iron, from the fact that they will get pretty hot. The cut at Fig. 4 shows all the parts in vertical section. The idea of this furnace is, the gasoline vapor is thrown into the chamber *o o* of the short tube *G* by the tube *E*, and the air from the power blowers is forced through the flame from the tube *F*. For the furnace described in article No. 47, about four such burners should be placed in the fire-box. A very efficient and easily constructed generator for producing gasoline vapor is illustrated at Fig. 5. The

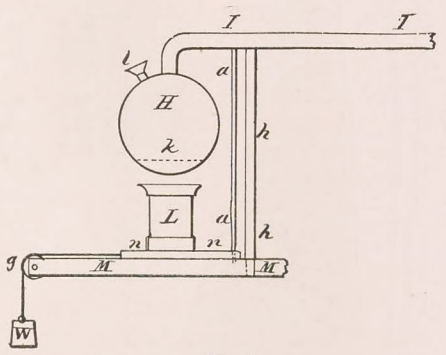

Fig. 5

idea of the device is a vessel made of sheet copper, such size as the service may demand. This vessel is to all intents and purposes a steam boiler, except gasoline is to be boiled in it instead of water.

The boiler *H* should be strongly made of about No. 16 sheet copper, and all joinings riveted like a steam boiler. The shape should be cylindrical with flat heads. The size should be about 8″ long by 8″ diameter. The whole boiler is attached to a strong seamless brass tube, ½″ outside diameter. The idea is, the boiler *H* hangs on the end of the tube *I*, and the natural spring of the tube is enough to lift the boiler when near empty, say, the gasoline is down to the line *k*. The tube *I* rests on the prop *h* and sustains the boiler *H*. For heating the boiler a coal oil stove is provided, as shown at *L*. This heating device is placed on a slide, shown at *n*. From the tube *I* descends a wire shown at *a*, which locks the slide *n* as long as the weight of gasoline in *H* holds *I* down on *h*, but as soon as the larger proportion of gasoline has evaporated, the slide *n* is pulled forward so the furnace *L* fails to heat the boiler *H*, and in this way we have a safety action. The gasoline vapor given off through the tube *I* is pure and not mingled with air. For a melting furnace no method we have seen equals the one just described. With a natural draft and four jets of gasoline vapor thrown into the furnace, shown at Fig. 2, article No. 47, ten pounds of brass can be melted in twenty minutes.

[TO BE CONTINUED]

We wish you would consider our establishment as the crucible into which your old gold and silver scraps and filings should be thrown.

It will prove a crucible into which the raw material goes, and out of which the largest possible profit is sure to come.

We always pay the highest market prices, pay for full weight every time, and send you a check as soon as the shipment gets here, holding the same subject to your acceptance of our check.

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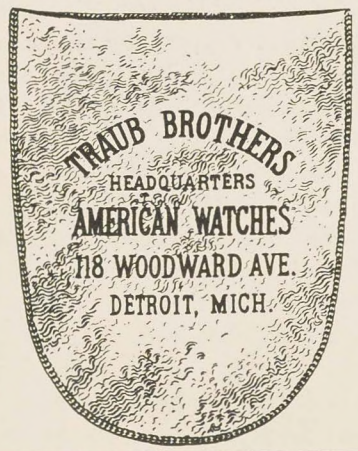

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Through our "MAIL ORDER DEPARTMENT," we offer you ***Warranted Non-Tarnishable Oil Tanned Chamois WATCH BAGS,*** all sizes, from 00 to 20, inclusive, at **$1.25** per gross. Put up in any assortment of sizes desired. All our goods are neatly sewed on French overstich machines in assorted colored stitching.

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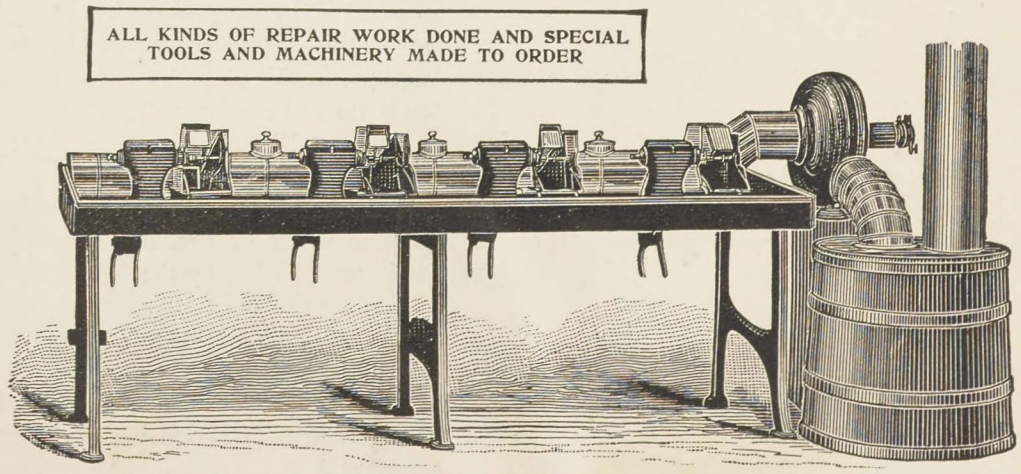


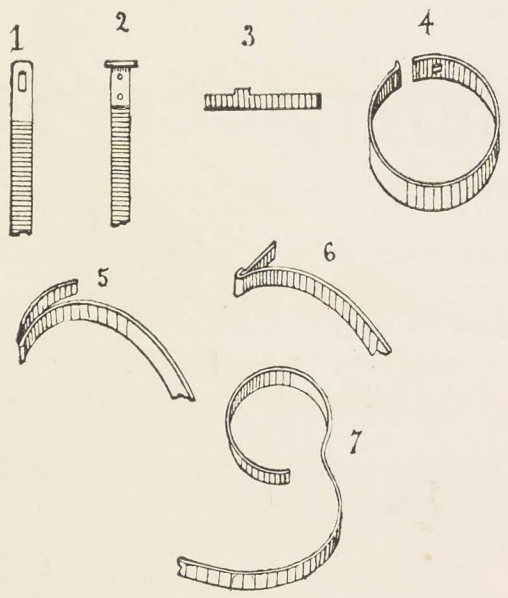
The above cut represents the Polishing Bench built by McWilliams Mfg. Co. in 1873

Hooking of the Mainspring

Translated for THE KEYSTONE from the Moniteur de la Bijouterie et de l'Horlogerie

OF late years watchmakers have made barrel hooks by forcing back a piece of the metal on the inside of the collet without detaching it, by means of pincers furnished with an awl. Swiss and French manufacturers of the highest standing make hooks in this way for their best watches. It has two advantages, solidity and saving in time.

The hooking of the spring in the barrel has been attempted by various systems designed to afford security and to do away with the stop-work. There is the spring with eye in common use, as in No. 1, and the English



spring terminating in the form of pivots, which is one of the oldest systems. It has the advantage of not unhooking, except in very thin watches, where the lack of thickness for the spring ribbon does not offer sufficient security. The slight projection of the pivots would cause them to slip out in a short time. This defect occurs in ordinary watches when the spring has been selected from too low a number.

About forty years ago M. Boussard, of Toulouse, contrived the small stop (No. 3), not replacing the eye of the spring, but securing it from unhooking. It was employed at first by attaching it to the spring by means of a rivet near the eye, and afterwards by simply sliding it into the place to be occupied. The barrel cover ought to be cut for the free passage of the stop—free, but without play, in order to keep the eye of the spring firm to the hook.

The plan represented in No. 4 is employed in large barrels, like those of carriage watches, in which the winding force occasioned by a large knob would cause, at the end of the winding of the spring, the breaking of the ordinary barrel hook, even if the spring itself were not unhooked under the excess of pressure. The independent steel ring carrying a hook requires a barrel arbor collet, having vertical grooves on the inside. When, on winding the spring, the knob is forced a little, after the winding limit is reached, the ring escapes from one groove to another, giving the illusion of an unhooking spring.

The ending of spring No. 5 and that of No. 6 are common. They avoid unhooking. No. 6 is preferable; with its small independent piece of spring it incurs less danger of breaking than No. 5. Their defect is in reducing the free part of the barrel. No. 5 requires more space than No. 6.

No. 7 is one of the rarest systems in existence, but it is worth a description. It does not include a barrel hook of any kind, or consequently an eye for the spring. The inside of the collet is smooth. The spring is also smooth, but the spring has about double thickness in the part against the collet, where it is maintained by its opening pressure alone. It is advantageous in suppressing the barrel hook and the spring eye, especially in small watches. Still, this plan is not adapted to watches of low price, on account of the cost of the springs, which is much higher than that of springs in ordinary use. Besides, it is not suitable for modifications.

It is well for a spring to make four turns and a half when it is not provided with stop-work. The half turn in addition to the four is to be considered as so much reserve. The remaining four turns give 32 hours of going, since each turn of the barrel with 80 teeth and center pinion of 10, is equivalent to 8 hours.

Origin of Coins

An interesting lecture was recently delivered in Philadelphia by A. E. Outerbridge, Jr., his subject being "The Origin of Coined Money." Mr. Outerbridge was formerly connected with the mint as chemist, and while in that position became very familiar with the subject of coins. The following is a brief résumé of his lecture:

Barter, or trading one thing for another, as a pair of shoes for a calf, or a gun for twenty beaver skins, was the original method of making exchange. It survives to a greater or less extent in primitive communities, but its inconvenience, as civilization advanced, made the adoption of some standard of value necessary. Such a standard must be a common medium of exchange and must be a common measure of values.

Various articles were used by different peoples, among which were the skins of wild animals, shells, cattle, corn, beads, iron, tin, copper, silver and gold. Cattle were long the standard, and our money terms to-day show that fact. The word "pecuniary" comes from the Latin *pecus*, cattle, and the word "capital," or an accumulation of wealth, from *caput*, the head, or a reckoning of a man's wealth in cattle by the number of heads. In Norway corn was once used, and the depositories were established for corn, which was borrowed upon.

It came to be understood that something having value in itself could alone become a medium of general exchange, and it must be suitable. It must be indestructible and not depreciate in value, and it must be divisible, so that if divided into parts all the parts would be equal in value to the whole. A diamond would not answer, because, if broken in two parts, neither part would be worth half the original gem. Gold was found to be the most stable in value, and silver next. Iron would rust out, and, although iron was used by several ancient nations, not one piece of such money has come down to us. Copper was too heavy for large transactions.

The first metal stamped to indicate its value was a piece of silver stamped by Phidon, king of Argos, about 600 B. C. It was done at Aegina, and the design was the king's seal, an island, which was stamped upon it.

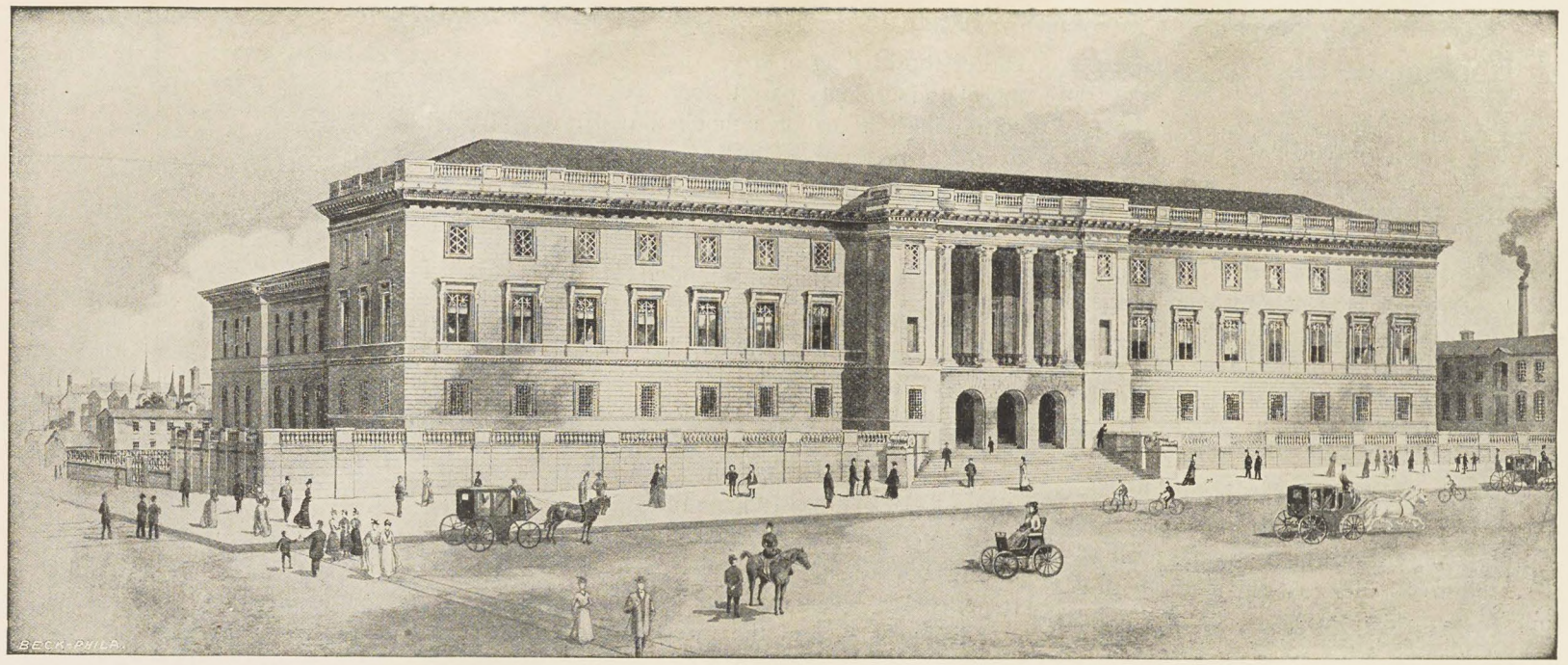
A series of lantern slides gave the gradual development of artistic designs, from the shapeless coin above referred to, to the beautiful products of the modern mints. The second of the ancient designs was a tortoise, then a dolphin, an owl, a shield. The first coin with letters upon it was made at Syracuse. The metal was pounded into the die by a punch, and the back of the die showed the punch mark. In time, the back, or "obverse" of the coin, was made ornamental.

One of the handsomest of the ancient coins was coined by Alexander the Great, who was desirous that his face should descend to posterity. It was a large gold coin. Mr. Outerbridge possessed one of these, and it and many other rare coins were shown on the screen by Professor D. S. Holman by an invention of his called the "megascope." It showed the object on the screen in its true colors, standing out as though it could be picked up. Gold showed as gold and silver glistened like that white metal. A shell used as money was shown with its changeable colors.

Among the curiosities shown was a sample silver dollar of the year 1792, which was shown to George Washington and his Cabinet for adoption. Washington looked very stern when it met his gaze, and the artist engraver who had made it was disappointed. The Father of his Country discerned his own portrait on the piece, and, although it was an excellent one, he said it must be destroyed; that the head of Liberty should go on the piece and not that of any ruler. That dictum has ruled until the present day, and the head of no statesman or politician has ever appeared on the coins.

Montana's Sapphire Fields

Professor Elrod, of the University of Montana, gives a striking description of the treasure that his state possesses in sapphires. The only systematic mining for these precious stones in the United States is done in Montana. The annual output amounts to 450,000 or 500,000 carats, including the stones that are suitable for cutting, as gems and those that are only useful for mechanical purposes. It is said that the lapidaries in Helena do finer work than is done on the stones that are sent to London to be cut. Perhaps somebody will suggest that Montana should be called the "Gem State," in view of the fact that her output of precious stones exceeds the production in that line of all the rest of the United States.



U. S. Mint, Philadelphia.

THE UNITED STATES GOVERNMENT ACCEPTS

OLD GOLD

at its mints and assay offices, large consignments of old gold, refines same and remits proceeds by express.

About 6 to 8 days' time is required to get returns from which refining and coinage charges are deducted and return expressage to pay.

The value placed by the U. S. Government on a consignment is absolute and final, from which there is no recourse.

Wendell and Company accept at their assay offices and refineries small lots of Old Gold ($1 to $250), remit full value at once by draft, before refining, and hold consignments until valuations are accepted.

If there is any doubt about the valuation placed upon a consignment by them, it is immediately returned in its original condition, express charges prepaid.

Their large business requires complete assaying, smelting and refining departments. They handle without additional expense and use in their own factories all old gold and silver consigned to them. The difference in the value of old gold (before refining) and fine gold (after refining) is their profit, which is very much smaller than it would have to be if they conducted a separate refining business with a large investment in plants and expenses ranging from 15 to 25 per cent. of the value of old metal received.

THE UNITED STATES GOVERNMENT DOES NOT BUY OLD SILVER

It accepts same for refining, and returns the fine silver in bars, less the refining charges, by express.

Wendell and Company buy old silver outright at the full market value, which is governed by the price of fine silver.

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Sell it to Wendell and Company for full cash value and pay your bills with the returns. You will save much by so doing, Most of the firms that take gold and silver on account do not use it themselves; nor have they any means of ascertaining its exact value, but depend on others, who place a value on it that will afford two profits.

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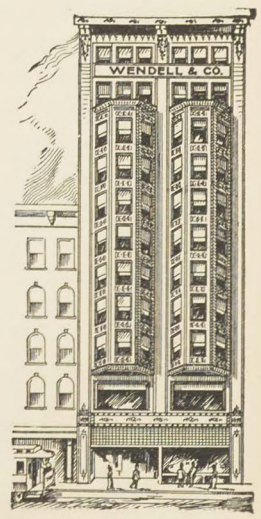


57 Washington St.,
Chicago.

Workshop Notes

Subscribers wishing inquiries answered in this department must send name and address—not for publication, but as an evidence of good faith. No attention will be paid to anonymous communications. Questions will be answered in the order in which they are received.

An *INDEX* to the questions answered in Workshop Notes department for each year accompanies each December number. Subscribers are requested to preserve these indexes, and, before mailing questions, to refer to them, as similar questions may have been answered in previous issues. These indexes are arranged alphabetically, according to subject covered in each answer, and tell the issue and page on which the information may be found.

"Meerschaum No. 1."—I have a broken meerschaum pipe to repair, and would like to know what cement to use to make a nice joint.—A very good one may be prepared as follows: Make up a mixture of about the consistency of thick cream, using the white of an egg and finely powdered quicklime. Such cement is applied to both parts to be joined with a camelshair brush and is then allowed to dry very slowly, and when thoroughly dry all excess cement is scraped off. In a break in the bowl or close to it, it is a difficult matter to achieve satisfactory results with cement alone; for no matter what cement you use, it may not be strong enough to stand and at the same time resist the action of the heat that it will necessarily be subjected to. If you do not desire to place a band around the break, it will probably be a good plan to insert a couple of steady pins. This can readily be accomplished by cutting off pieces of suitable length from a sewing needle, and allowing them to enter each part of the pipe where broken a short distance—say about an eighth of an inch in each piece. Such pieces can probably be forced in without drilling. Repairing a pipe of this kind sometimes proves a difficult matter, and it is also difficult to give proper instructions for doing it without seeing the work.

"Sard."—We wish to remove the set from a gent's signet ring. It is an oval sard, and the setting is beveled or burnished over so that we cannot get a tool between it and the sard. We cannot work from it at the back, as it is a closed setting and sard only shows from front. We want to solder the ring.—If a tool cannot be introduced between the sard and the gold, it would seem that the only thing to do is to cut away a little of the gold with a graver, and make room for the tool. The small portion that is cut away need not be considered, as the stone can be reset by burnishing after the work has been done on the ring.

"Balance Wheel."—(1) Will you give me a proper way to increase the swing of a balance wheel of a watch and of a timepiece.—There are a great many workmen who attempt to increase the action of the balance (increase the swing) of a watch by putting in a very strong mainspring. This can be done in Swiss watches, but in American watches, where the mainspring comes to us the right width and strength, they are at a loss as to what to do. There is no proper way to get a good action to a balance except to put the watch in good condition, especially the escapement, which means the escape-wheel, pallets and balance. The causes of a balance taking a poor action are so many that we hardly know where to tell you to begin to look for the fault. There may be a binding in the train, pivot holes may be too large, cracked jewels, escapement too deep or too shallow, roller jewel loose or too small, banking pins too far apart, chipped pallet stones, balance out of true or out of poise, and a hundred and one other things. Start from the barrel and work down to the balance, putting each part in good order, when no doubt you will find that you have increased the action greatly.

(2) Will you let me know how and where to take the exact measurement of a cylinder, both inside and outside measurements.—We take from your question that you desire to pick out a new cylinder for a cylinder movement. In the October, 1903, KEYSTONE, page 1517, in reply to "Swivel," we give a full description as to how to pick out a new escape-wheel to fit a cylinder; now, to pick out a new cylinder, you follow the same directions.

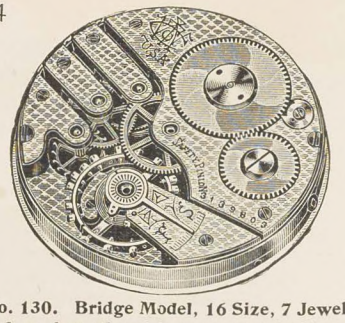
(3) What can I line vats with to make them water tight and use for plating solutions?—You do not state for what kind of solutions you intend using such vats. For the solutions generally used by a jeweler (gold and silver), wooden vats are not calculated to give very good results, and, in fact, many claim that they should never be used. Stoneware, glass, porcelain or agate vessels are much to be preferred and are in general use. This is not to be wondered at when one considers that they can be obtained for such a small sum, that they are far cheaper than those of wood. If, however, you intend to use a very large wooden vat, we would say that it should be very strongly and carefully constructed, and the ends should be secured by bolts and nuts, to hold sides firmly against end pieces. They can be coated with a mixture of equal parts of pitch and resin, boiled with a small quantity of linseed oil. There are several other preparations that have proved effective. One of them consists of gutta percha, 10 parts; pitch, 3 parts; stearine, 1½ parts; linseed oil, 1½ parts. These ingredients are melted together and incorporated.

"Alcohol."—What is the reason some gilt watches turn black in alcohol? They look as if were heated or burned, and I use the best alcohol I can get.—Grain alcohol will not discolor a watch plate or watch wheels, providing they are brushed dry or dried in sawdust as soon as they are taken out of the alcohol, but will discolor them if the alcohol is allowed to evaporate.

"Steel."—Kindly give formula for oxidizing or coloring steel, iron, brass, etc.—You will find instructions for coloring brass on page 1421, September, 1904, issue. A lustrous black on iron is obtained by the application of a solution of sulphur in spirits of turpentine prepared by boiling upon the water bath. After the evaporation of the spirits of turpentine a thin layer of sulphur remains upon the iron, which, on heating the article, intimately combines with the metal. By another method the cleansed and pickled iron articles are coated when dry with linseed oil and heated to a dark red. If pickling is omitted, the coating with linseed oil and heating have to be repeated twice or three times. According to Mériten a lustrous black on iron is obtained by placing the articles as anode in distilled water heated to 158° F. and using an iron plate as cathode. A layer of ferroso-ferric oxide is formed which, however, can only be obtained in a firmly adhering state upon wrought-iron. The luster appears by brushing with a soft-waxed brush. The current conducted into the bath must only be strong enough to decompose the water without perpceptible development of gas. Brown-black Coating with Bronze Luster on Iron.—Heat the bright iron objects and brush them over with a concentrated solution of potassium bichromate. When dry heat them over a charcoal fire and wash until the water running off shows no longer a yellow color. Repeat the operation twice or three times. A similar coating is obtained by heating the iron objects with a solution of 10 parts of sulphate of iron (green vitriol) and 1 part of sal-ammoniac in water. To give Iron a Silver-like Appearance with High Luster.—Scour the polished and pickled iron surfaces with a solution prepared as follows: Heat moderately 1½ ounces of chloride of antimony, 0.35 ounces of pulverized arsenious acid and 2.82 ounces of elutriated blood-stone with 1 quart of 90 per cent. alcohol upon a water bath for half an hour. A partial solution takes place. Dip into this fluid a tuft of cotton and go over the iron portions, using a slight pressure. A thin film of arsenic and antimony is thereby precipitated, which is the more lustrous the more carefully the iron had been previously polished. To Color Iron and Steel Blue.—Polish and cleanse the article thoroughly with lime and then brush it over with the following mixture: Butter of antimony, 8 parts; fuming nitric acid, 8; and hydrochloric acid, 16. Add the hydrochloric acid very slowly and drop by drop to avoid heating. Apply the mixture to the steel with a rag, and rub with green, young oak wood until the desired blue color is produced. According to Böttger a durable blue on iron and steel may be obtained by dipping the article in a ½ per cent. solution of potassium ferricyanide (red prussiate of potash) mixed with an equal volume of a ½ per cent. solution of ferric chloride. To Color Iron and Steel Gray.—Polish the article, and coat it with a mixture of butter of antimony, 8 parts; and sulphuric acid, 2 parts. If the color does not turn out handsome enough add a few drops of acetic acid. Thierault's Process for Coloring Wrought-iron and Steel.—Thierault has invented a process for coloring iron and steel, which is intended at the same time to protect the material from rust and increase the beauty of their appearance. The process has been introduced in practice and has proved useful. In the patent specification the following mixtures are mentioned as suitable for the execution of the process: Fluid No. 1 contains chloride of mercury and sal-ammoniac; No. 2 contains chloride of iron, sulphate of copper, nitric acid, alcohol and water; No. 3, ferrous chloride besides nitric acid, alcohol and water; and No. 4, a weak solution of potassium sulphide. The articles are thoroughly cleansed from grease by immersion in boiling potash lye and rinsing in water, and when dry are twice brushed over with a sponge slightly saturated with fluid No. 1, the second layer being applied when the crust of oxide formed upon the metal is entirely dry and has been rubbed off with a scratch-brush and iron fllings and dried with linen. The remaining operations are executed in the same manner. Several layers of fluid No. 2 are next applied and then fluid No. 3, the sponge being thoroughly soaked with the latter. After drying 10 minutes the articles are thrown into a bath of water at 194° to 212° F., in which they remain for 5 to 10 minutes, according to their bulk. When taken out and dried, a few more layers of fluid No. 3 are applied, next a layer of fluid No. 4, and then the articles are again immersed in hot water. When taken from the bath they are wiped off and receive several more layers of fluid No. 3, diluted for this purpose with water. They are then coated with a thin film of olive oil, washed off, immersed in water at 140° F. and then taken out, rubbed thoroughly first with a woolen rag and finally with a little olive oil. Articles of iron and steel thus treated have a beautiful black, lustrous appearance, especially when polished. To Blue Small Articles of Sheet-Steel.—Dip the articles in a fluid alloy composed of lead, 25 parts; and tin, 1 part, which is melted at the degree of heat required for bluing. The immersion may also be effected in a sand bath heated to and maintained at the required temperature, 572° F. for dark blue, 478° F. for pale blue. To Blue Small Articles of Iron and Steel so as to Leave Portions of them Bright.—The ground and finely polished work is blued, which is best effected over a thick iron plate heated red-hot. In order to insure uniformity, the work should not be laid directly on the plate, but held at some distance over it. The bluing being effected, which will be the finer and more durable, the better and more compact the material used in the work, the places which are to remain blue are covered with an oil paint and allowed to dry somewhat. Heated wine vinegar is then poured over the whole, whereby the places not covered by the oil paint immediately become bright. By using the wine vinegar cold it must act about 5 minutes, and the surface obtained is not lustrous but a dead white. After the treatment with vinegar the work is dipped into cold water. The oil paint in then removed, which is readily effected. By this method the bright places retain their polish and show great luster.

"Wheel No. 2."—I would like you to tell me how to cut the shoulder of a balance staff. I have a lot of trouble in undercutting old staffs to get them out of balance, and have the same trouble when I try to undercut a new staff. Please tell me if it is right to draw the temper or what tool do you use? I have tried all kinds of gravers and have never found one that would cut a staff that was highly tempered. If you draw the temper how do you keep from bluing the arms of balance?—See answer to "Wheel," in August, 1904, KEYSTONE, page 1253.

"Extra."—I have trouble in cutting off the extra length on pin used to pin in hairsprings to studs.—You can buy from any material house a pair of cutting tweezers. They are made just like a pair of ordinary tweezers, but instead of coming to a point, they have a pair of cutting jaws the same as cutting pliers. With these you can get up close to the hairspring stud and can cut the pin as short as you want without any trouble.



No. 130. Bridge Model, 16 Size, 7 Jewels
Nickel damaskeened, quick train, straight line escapement, exposed pallets, cut expansion balance, hardened and tempered breguet hairspring, safety pinion, screw bankings, exposed polished steel winding wheels, dust band, roman or arabic white enamel dial with monogram "T. W. Co." **Price, $7.00**

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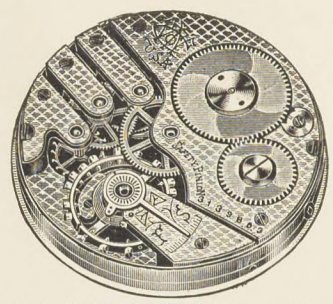

No. 135. Bridge Model, 16 Size, 11 Jewels
Nickel damaskeened, quick train, straight line escapement, exposed pallets, cut expansion balance, hardened and tempered breguet hairspring, safety pinion, screw bankings, exposed polished steel winding wheels, dust band, depressed center and seconds, white enamel dial with monogram "T. W. Co." **Price, $8.50**

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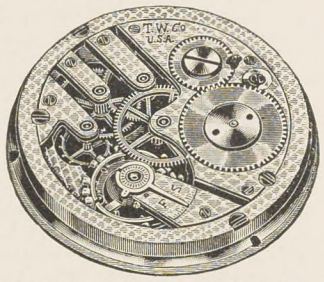
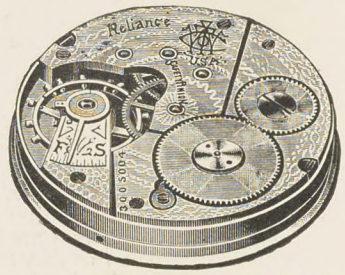
Moderate in Price

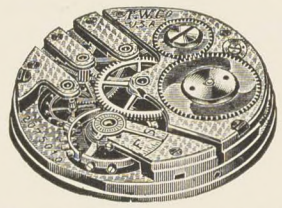
Thoroughly well finished



No. 315. "FORTUNA." Special 12 Size, 7 Jewels
Nickel damaskeened, cut expansion balance, safety pinions, screw bankings, straight line lever escapement, hardened and tempered breguet hairspring, quick train, exposed winding wheels, handsome white enamel dial with depressed second and red marginal figures. Stem-wind and lever set. **Price, $6.00**



No. 200. "RELIANCE." 16 Size, 7 Jewels
Nickel damaskeened, cut expansion balance, safety pinion, screw bankings, straight line lever escapement, hardened and tempered breguet hairspring, quick train, exposed winding wheels, dust band, handsome white enamel dial with depressed seconds. Lever setting.
Hunting only. Price, $6.00



No. 300. "FORTUNA." 6 Size, 7 Jewels
Nickel damaskeened, cut expansion balance, safety pinion, screw bankings, straight line lever escapement, hardened and tempered breguet hairspring, quick train, exposed winding wheels, handsome white enamel dial with depressed second and red marginal figures. Stem-wind and lever set. **Price, $5.00**

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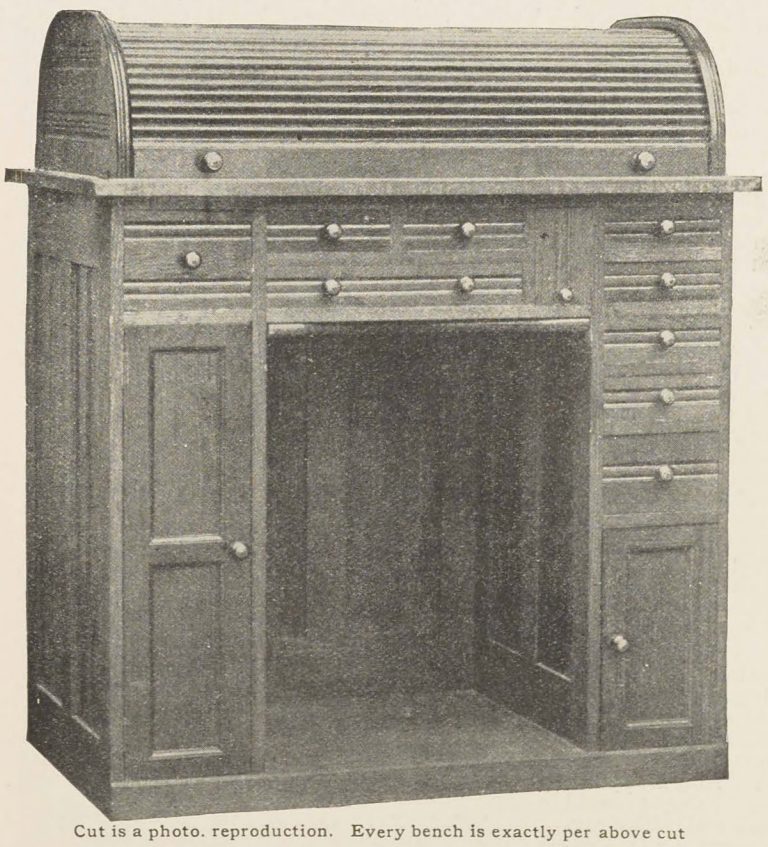

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Solid Oak Roll-Top Benches

Specifications: Solid Oak, Curtain Top, paneled doors, sides and back; fine cabinet finish. Drawers lock automatically; one drawer arranged for chucks. Brass trimmings on knobs. Lock and key on right side of bench. Both top sides fastened with hinges and turn down. Mounted on castors. Dimensions: 44 inches long, 40 inches high, 26 inches wide. Solid Oak throughout (no soft wood bottom and back, as most other benches are made). Guaranteed in every respect.

Special Price (Cash must accompany every order)

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Watchmaker's Bench **open top,** solid oak throughout, paneled doors, sides and back. Fine cabinet finish. One drawer arranged for chucks; also apron drawer. Has fancy knobs. Size: 40 inches long, 40 inches high, 20 inches wide, with a parallel moulding all around. **Special price, cash with order, $8.80 Net**

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KING & EISELE, Manufacturers BUFFALO, N.Y.

Workshop Notes

Subscribers wishing inquiries answered in this department must send name and address—not for publication, but as an evidence of good faith. No attention will be paid to anonymous communications. Questions will be answered in the order in which they are received

"Battery."—Can you tell me how to make a battery that only uses one chemical?—A very good single-fluid cell is described in "Bottone's Electrical Instrument Making." For the containing vessel, a Westall salt jar, or one of the 2-pound plum bottles, will do very well. For very small cells, the smaller sizes of Liebig's "extract of beef" pots answer admirably. The zinc and copper (or graphite) elements having been cut of the right size to enter the vessel, and yet leave a good ⅛″ clear between the zinc and negative element, two strips of paraffined wood ⅛″ thick and from ½″ to 1″ wide, according to the size of the battery, are cut a little longer than the diameter of the containing cell. A small strip of clean sheet copper, to one end of which the wire which is to form one pole of the battery is soldered, is placed in contact with the upper end of the zinc plate. Over this is to be placed one of the paraffined wooden strips, then the negative element. If the amateur is content with a single negative element (be it copper, graphite, silver or platinum), he need now only place the second strip of paraffined wood over the top edge of the negative plate with a little copper strip and wire (as before, to form the other pole of the battery) between the negative plate and wooden strip. The whole is now clamped together between the jaws of a clamping binding screw, or if the larger elements are used, between the jaws of a sewing machine clamp. Care must be taken that the binding screw or clamp does not make contact between the negative and positive elements. As much better results are obtained when the negative elements are double, the amateur will probably prefer to have two carbons or coppers to each zinc. In this case, after having placed the copper piece, to which the wire is attached, against the top end of the zinc, he will put a paraffined wooden strip on each side of the top end of the zinc, then a negative element on each side of the zinc. If the negatives are graphites a wide copper band should encircle both graphites, and the clamp should grip the band against the graphites, care being taken, as before, that the graphites, neither through the clamp nor through the copper band at any place make contact with the zinc.

"Turning."—(1) In turning pinions, what is the best way to proceed to shorten the body of pinion, also to make seat for wheel without injuring the edge of graver?—The proper way to turn in a new Swiss pinion is to revolve the pinion in the lathe with a dead-center whirl. This is an attachment that costs very little, and the object of it is to run the pinion at a high rate of speed, which causes the pinion, when revolving, to act on the graver point as a solid mass. A pinion can be turned this way as easily as a solid piece of steel. It is impossible to keep a point on a graver if the pinion is revolved slowly.

(2) *When the barrel holes are worn wide, what is the best way to repair and true up?*—The only and proper method is to rebush the barrel-arbor holes.

"Timing."—In timing watches—I mean watches with Breguet hairsprings—how close ought they to run when clean and in good condition, before depending on the regulator for closer timing? In a high-grade watch of 17 to 21-jewel grade, in bringing to close time, I find the balance washers you buy seem too heavy, or make too much difference. Can you tell me where I can procure a very thin light washer, and how much difference ought a pair of balance washers make in timing, say 24 hours? How close should a 17 or 21-jewel movement, of good American make, run in three months? What effect does cleaning generally have on movements in regard to timing? I frequently have high-grade movements that lose time after cleaning. I clean with benzine, cyanide, alcohol, soap and water, and dry in sawdust in the manner described in THE KEYSTONE, *and am very particular through the whole process, and the watches are put up clean and properly oiled.*—A watch should be made to run within about one-half minute in twenty-four hours, with the regulator in the center. American movements of the high-grade order, from 17 to 23-jewel, should keep a rate of one minute a month. If we get them to do this it is all we can expect of them. After cleaning a watch you will generally find it to gain time for the first week or so, then when the oil thickens it will start to lose. It is advisable, when regulating a watch after it has been cleaned, to allow the rate to be a gaining one. You are not the only watchmaker that has trouble to get the proper weight timing washers—that is, washers to suit all occasions. The most satisfactory method is to make your own washers. This any workman can do with very little trouble. Take a piece of Stub's steel wire, about 2″ long and about as thick as will fit a No. 18 Webster-Whitcomb chuck; turn it to the shape shown at *A*, Fig. 1, the size of the punch at the line *B* being the same as the head of a balance screw, while the part *C* is made a trifle larger than the thread part of the balance screw. A set of these punches should be made, such as 18 size, 16 size, 14 size, etc., which will answer for all makes of movements, for the balance screws for each size movement of different makes are very nearly the same size for all American makes. The material that is used to make the washers is sheet copper, which can be had of any tinsmith. The copper used to make and repair bath tubs is just what we want, except that it is too heavy for general use. We can cut the copper into small strips and roll them out into different thicknesses with a pair of jeweler's rolls. By doing this we can get any weight washer that we want, and can change the rate of a watch from five seconds to three minutes with one pair in twenty-four hours. What we want to do is to number 1, 2, 3, etc., the different strips of copper which we rolled out, and make a memorandum in some convenient place for reference. For example, say we have an 18-size movement that gains two and one-half minutes in twenty-four hours. Now, from experimenting or previous experience, we know a pair of washers made from the copper strip marked No. 1, will cause the watch to fall off about two minutes in twenty-four hours. We know this is the strip we want to make our washers from for this watch, and so on. At first thought the average workmen will think that this is going to a good deal of trouble, but workmen who are required to do good work and have their watches run close, especially railroad inspectors, know what trouble they have to get the right pair of washers the first time, and this can be done if the above system is carried out. In making the washers the punch should be tempered hard and drawn to a blue. Place the copper strip on a boxwood block and give the punch a light blow with a hammer, when the washer will imbed itself in the block, which can easily be removed. In case a very heavy pair of washers is wanted, some workmen use platinum, which is a very heavy metal. One pair will make quite a difference in twenty-four hours.

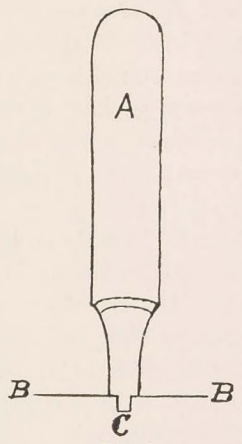


Fig. 1

"Mexico."—(1) What is the cause of mainsprings breaking in watches? Sometimes, after two or three months have elapsed from the date I deliver the watch, it is sent back to me. This will injure my reputation regarding my work. May be, here in Mexico, this is due to the atmospheric change on the oil employed for lubrication. Do you think so? Do you know of some method to save me this inconvenience?—There are as many mainsprings broken by careless handling as there are by all other causes. A mainspring should be handled as little as possible, and when taken out of the barrel it should not be pulled apart while cleaning. The perspiration from a workman's hands is often the cause of breaking a mainspring. A mainspring should be replaced into the barrel with a mainspring winder so that we touch it with our fingers as little as possible. A foreman of one of the largest repair shops in this country has kept a record by the month for the past fifteen years of the breakage of mainsprings, and looking over this record we find that during the rainy season, or during the time when we have thunder and lightning storms, there are more mainspring broken than during any other time of the year. This proves that atmospheric changes have a great deal to do with the breaking. The spring being removed from the barrel increases the chances of breaking. We would advise that when you take off a barrel lid and you find that the spring looks clean and the oil not gummy, do not remove it but clean the arbor and wipe off all the oil from the spring that you can with a rag, put a little fresh oil on, using a good clock oil, and see if this does not lessen the breaking.

(2) *What is the proper way to regulate an ordinary watch which either loses or gains a half minute every day?*—This will depend upon the kind of a balance wheel the watch contains, and also where the regulator is. If it is in the center, of course, by moving it will bring the watch to time, but in case the regulator is to one side, then if the balance has timing screws and the watch should lose or gain a half minute a day, we can bring it to time by turning the timing screws in or out as the case may be, but when all the balance screws are run up to the head our only plan would be to change the weight of the screws (in case the watch lost time) by turning out a little from under the screw head, and in case of it gaining, by adding a pair of washers. See answer to "Timing."

"Agib."—Please give us a process for bronzing copper.—This can be done by Brannt's process, as follows: Dissolve 30 parts of carbonate or hydrochlorate of ammonium and 10 parts each of common salt, cream of tartar and acetate of copper in 100 parts of acetic acid of moderate concentration or in 200 parts of strong vinegar, and add a little water. When an intimate mixture has been obtained, smear the copper object with it and let it dry at the ordinary temderature for 24 or 48 hours. At the end of that time the entire object will be found to be entirely covered with verdigris, presenting various tints. Then brush the whole, and especially the reliefs, with a waxed brush and, if necessary, set off the high reliefs with hematite or chrome yellow, or other suitable colors. Light touches of ammonia give a blue color to the green portions and carbonate of ammonium deepens the color of the parts on which it is laid.

"Barrel."—Please tell me how to remove the mainspring from the barrel of an 18-size American, 23-jewel, full-plate movement. The arbor seems to be swedged to barrel; steel, having shoulder on end that goes through main wheel.—By inspecting Fig. 1 yon can very nearly see how the barrel arbor comes apart. *A* represents the main part of the arbor, and extends through the barrel. *B* screws into *A* at *C*, after being put through the steel part of the barrel. To take a barrel of this kind apart, hold the arbor with a pair of flat-nose pliers at the top, and by turning the steel part of the barrel the part of the arbor *B* will unscrew.

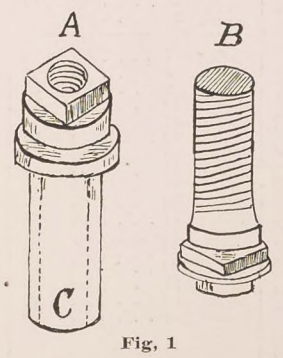


Fig. 1

"Rust."—What is the best method to remove rust from a movement? I find a great many rusted cannon pinnons and am almost invariably compelled to put in new ones.—See answers to "Keyless" and "English," page 247, February, 1904, KEYSTONE.

Useful Tables for the Melter

WE have recently had quite a number of inquiries for data relating to the alloying of gold, many of which, no doubt, have been induced by the serial on "Gold Working" now appearing in our columns. The majority of such inquiries have been for specific formulæ of but little, if any, interest to the great majority of our readers, and, under the circumstances, we would not feel justified in giving all of such inquiries the space necessary in our Workshop Notes Department.

In order to give the desired instructions, however, together with much additional information in this line, we reproduce on this page a set of tables compiled by the T. B. Hagstoz Co., Philadelphia, which will be found useful not only by those who have written us in the matter, but also by all those who are called upon to melt the precious metal. It will be noticed that one of the tables is for raising the quality of the gold and the other for reducing it, and that the calculations cover any desired changes from 6 karat to 24 karat.

We are also constantly in receipt of inquiries for instructions on different points in regard to melting and alloying gold, the kind of crucibles to be used, etc., and although it would require many pages to go into all the details of the various processes, a few hints may serve to assist the workman to a considerable extent.

As to crucibles, black lead or plumbago crucibles are the best for gold melting; but the ordinary sand or Hessian crucible can also be employed, although they will not stand any great number of reheatings. In fact, about three or four melts is all that such a crucible should be expected to stand. If sand crucibles are used, they should be "dusted" with borax and heated red hot before using for gold; this will, in a great measure, prevent the gold from going into the pores.

For a flux for gold melting, equal weights of charcoal powder (dust) and sal ammoniac will be found to be about the best. These ingredients are well mixed and placed in a packet of tissue paper and dropped into the crucible just at the instant the gold is preparing to melt. The object of the tissue paper is to prevent the currents of hot air from the furnace from blowing the charcoal dust away. The gold is fused and run well up to a white heat, and is well stirred with a clay-pipe stem or a rod of iron coated with clay.

The melted gold should not be poured into the ingot mold until the metal is well down to its last stages of fluidity. The ingot mold should be well oiled on the inside with some heavy oil (lard oil, for instance), and at the time the gold is poured should be heated to such a temperature as can just be borne by the hand.

One point that is usually neglected by the inexperienced workmen, and one that frequently gives rise to much worry and perplexity is the neglect to heat gold in the process of rolling. If the ingot is frequently heated to a faint (dull) red heat during the rolling process, it will have a marked tendency to prevent the cracking so frequently complained of.

If a bar cracks during the process of rolling, the fracture should be carefully examined. If it has a close grain and a pale yellow color, lead or tin is probably present. If, however, it has a dull brown color, iron or some other foreign matter is the cause of the brittleness. The best way to overcome the tendency to crack is to carefully remelt the alloy.

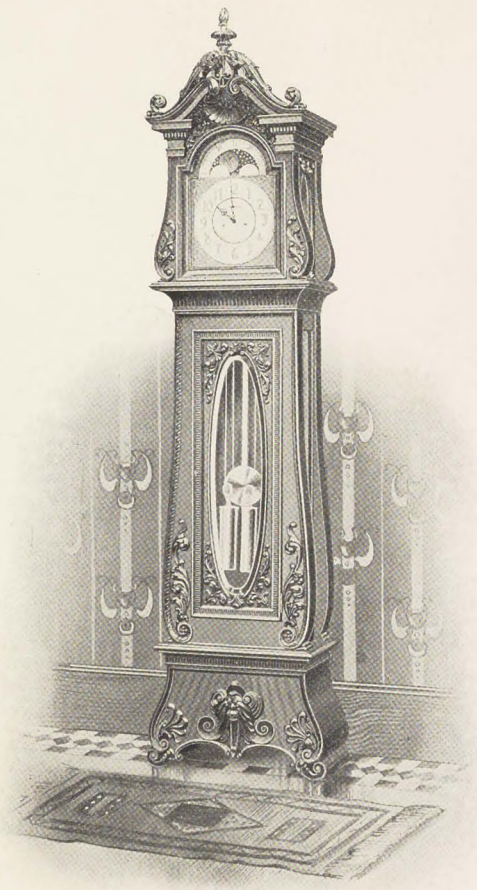
To Raise the Quality of Gold, Add Fine Gold to Each Ounce, According to Table Below

Quality.	Fine Gold. DWT.	GRS.
22 K. to 23 K	20	00
21 K. to 22 K	10	00
23	40	00
20 K. to 21 K	6	16
22	20	00
23	60	00
19 K. to 20 K	5	00
21	13	8
22	30	00
23	80	00
18 K. to 19 K	4	00
20	10	00
21	20	00
22	40	00
23	100	00
17 K. to 18 K	3	8
19	8	00
20	15	00
21	26	16
22	50	00
23	120	00
16 K. to 17 K	2	20
18	6	16
19	12	00
20	20	00
21	33	8
22	60	00
23	140	00
15 K. to 16 K	2	12
17	5	17
18	10	00
19	16	00
20	25	00
21	40	00
22	70	00
23	160	00
14 K. to 15 K	2	5
16	5	00
17	8	13
18	13	8
19	20	00
20	30	00
21	46	16
22	80	00
23	180	00
13 K. to 14 K	2	00
15	4	10
16	7	12
17	11	00
18	16	16
19	24	00
20	35	00
21	53	8
22	90	00
23	200	00
12 K. to 13 K	1	20
14	4	00
15	6	16
16	10	00
17	14	7
18	20	00
19	28	00
20	40	00
21	60	00
22	100	00
23	220	00
11 K. to 12 K	1	16
13	3	15
14	6	00
15	8	11
16	12	12
17	17	3
18	23	8
19	32	00
20	45	00
21	66	16
22	110	00
23	240	00
10 K. to 11 K	1	13
12	3	8
13	5	10
14	8	00
15	11	2
16	15	00
17	20	00
18	26	16
19	36	00
20	50	00
21	73	8
22	120	00
23	260	00
9 K. to 10 K	1	10
11	3	2
12	5	00
13	7	6
14	10	00
15	13	8
16	17	12
17	22	20
18	30	00
19	40	00
20	55	00
21	80	00
22	130	00
23	280	00
8 K. to 9 K	1	8
10	2	21
11	4	14
12	6	16
13	9	2
14	12	00
15	15	13
16	20	00
17	25	17
18	33	8
19	44	00
20	60	00
21	86	16
22	140	00
23	300	00
7 K. to 8 K	1	6
9	2	16
10	4	7
11	6	4
12	8	8
13	10	22
14	14	00
15	17	18
16	22	12
17	28	13
18	36	16
19	48	00
20	65	00
21	93	8
22	150	00
23	320	00
6 K. to 7 K	1	4
8	2	12
9	4	00
10	5	17
11	7	16
12	10	00
13	12	17
14	16	00
15	20	00
16	25	00
17	31	10
18	40	00
19	52	00
20	77	00
21	100	00
22	160	00
23	340	00

To Reduce the Quality of Gold, Add Alloy to Each Ounce, According to Table Below

Quality.	Alloy. DWT.	GRS.
24 K. to 23 K	00	21
22	1	20
21	2	21
20	4	00
19	5	6
18	6	16
17	8	6
16	10	00
15	12	00
14	14	7
13	16	22
12	20	00
11	23	15
10	28	00
9	33	9
8	39	23
7	48	13
6	60	00
23 K. to 22 K	00	22
21	1	22
20	3	00
19	4	5
18	5	13
17	7	1
16	8	18
15	10	16
14	12	21
13	15	9
12	18	8
11	21	20
10	26	00
9	31	3
8	37	11
7	45	7
6	56	16
22 K. to 21 K	00	23
20	2	00
19	3	4
18	4	11
17	5	21
16	7	12
15	9	8
14	11	11
13	13	20
12	16	16
11	20	00
10	24	00
9	28	22
8	34	23
7	42	20
6	53	8
21 K. to 20 K	1	00
19	2	2
18	3	8
17	4	17
16	6	6
15	8	00
14	10	00
13	12	7
12	15	00
11	18	4
10	22	00
9	26	16
8	32	11
7	39	23
6	50	6
20 K. to 19 K	1	1
18	2	5
17	3	13
16	5	00
15	6	16
14	8	14
13	10	18
12	13	8
11	16	9
10	20	00
9	24	11
8	29	23
7	37	2
6	46	15
19 K. to 18 K	1	3
17	2	9
16	3	18
15	5	8
14	7	4
13	9	6
12	11	16
11	14	13
10	18	00
9	22	6
8	27	12
7	34	7
6	43	8
18 K. to 17 K	1	4
16	2	14
15	4	00
14	5	18
13	7	17
12	10	00
11	12	18
10	16	00
9	20	1
8	24	23
7	31	10
6	40	00
17 K. to 16 K	1	6
15	2	16
14	4	7
13	6	4
12	8	8
11	10	22
10	14	00
9	17	19
8	22	11
7	28	13
6	36	16
16 K. to 15 K	1	8
14	2	21
13	4	15
12	6	16
11	9	2
10	12	00
9	15	14
8	19	23
7	25	17
6	33	8
15 K. to 14 K	1	10
13	3	2
12	5	00
11	7	6
10	10	00
9	13	8
8	17	11
7	22	20
6	30	00
14 K. to 13 K	1	13
12	3	8
11	5	11
10	8	00
9	11	3
8	14	23
7	19	23
6	26	15
13 K. to 12 K	1	16
11	3	15
10	6	00
9	8	22
8	12	12
7	17	3
6	23	8
12 K. to 11 K	1	20
10	4	00
9	6	16
8	10	00
7	14	7
6	20	00
11 K. to 10 K	2	00
9	4	11
8	7	12
7	11	10
6	16	16
10 K. to 9 K	2	6
8	4	23
7	8	13
6	13	8
9 K. to 8 K	2	11
7	5	17
6	10	00
8 K. to 7 K	2	3
6	6	16
7 K. to 6 K	3	8

CROWN HALL CLOCKS



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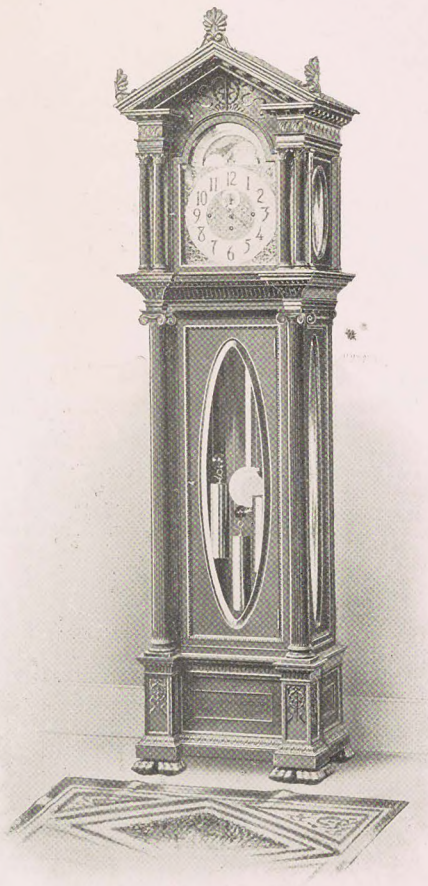

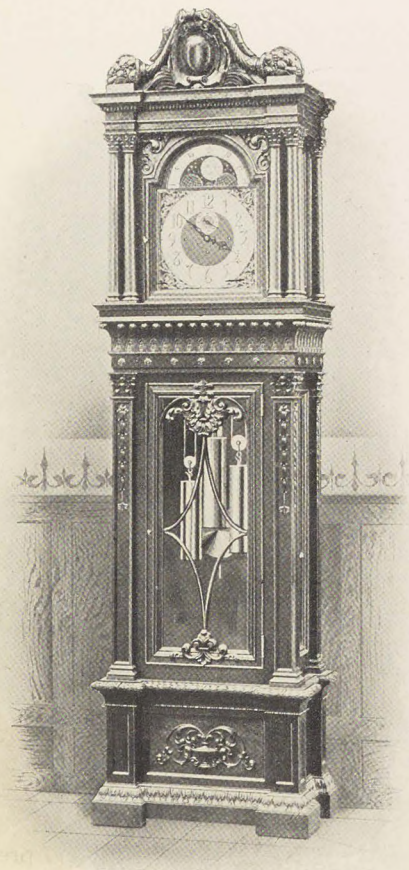

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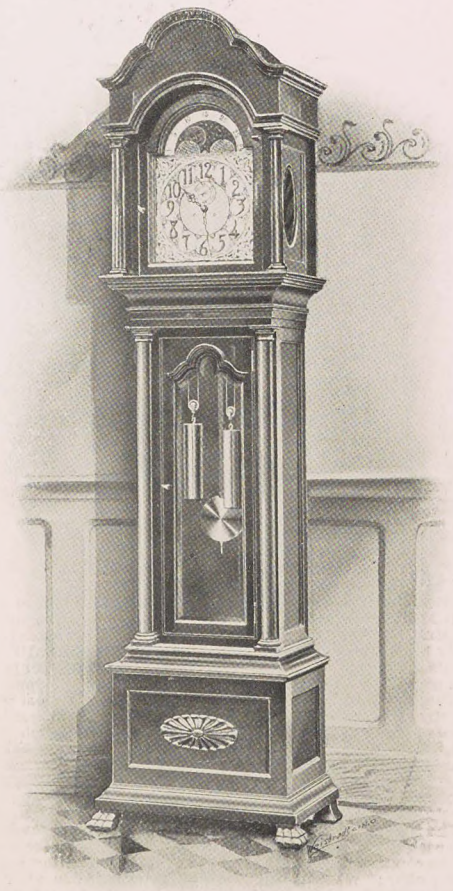

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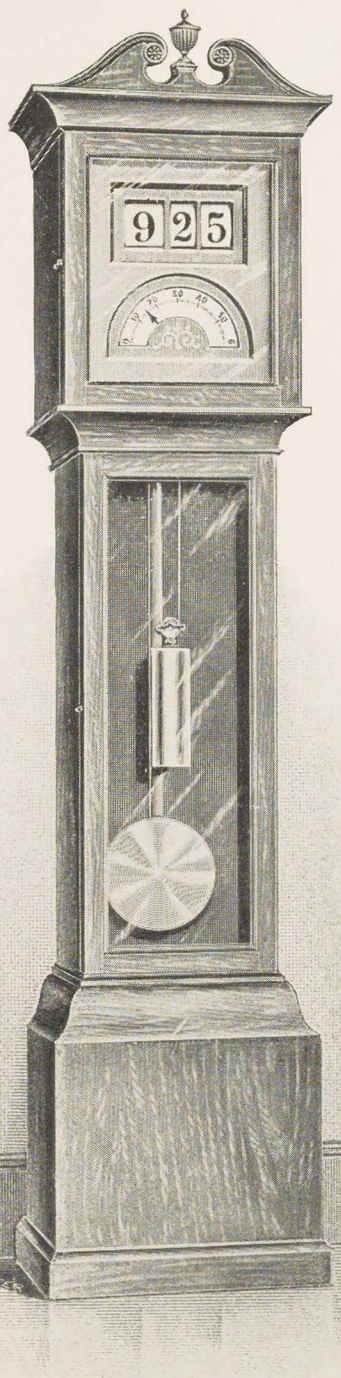

Hall No. 1

THE THRASHER TIME SYSTEM

INCORPORATED

NEW HAVEN, CONN.

THE THRASHER TIME SYSTEM, Incorporated

This company is organized under the laws of Connecticut, and owns all right, title and interest in and to ten United States patents for a new time system invented by Samuel Powers Thrasher, of New Haven, Connecticut.

NOT EXPERIMENTAL. The company is not organized for the purpose of developing an untried invention. Mr. Thrasher made some of these time-indicating devices nearly five years ago, and they are running satisfactorily to-day. He has shown exceptional skill and untiring energy in perfecting the invention and protecting his rights. He has had issued, in his own name, ten patents from the United States Patent Office and fifteen in foreign countries. The United States patents have been purchased by this company.

The company is ready to do business. This system is now being installed in the New Haven Y. M. C. A., one of the finest buildings of the kind in the country, costing more than $300,000. This Time System is now in practical operation at the offices of the company, 82 Church Street, and adjoining rooms; inspection is invited.

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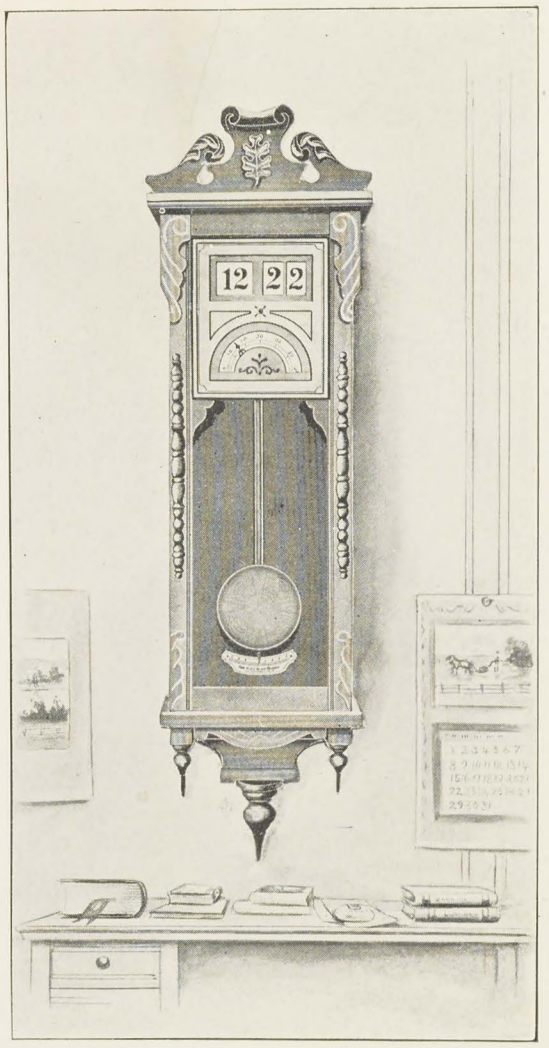

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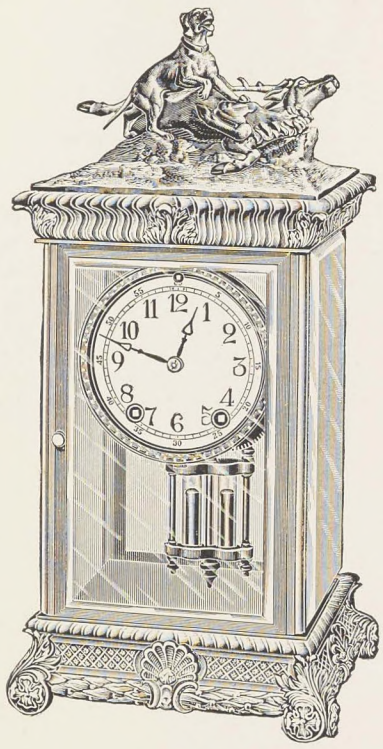
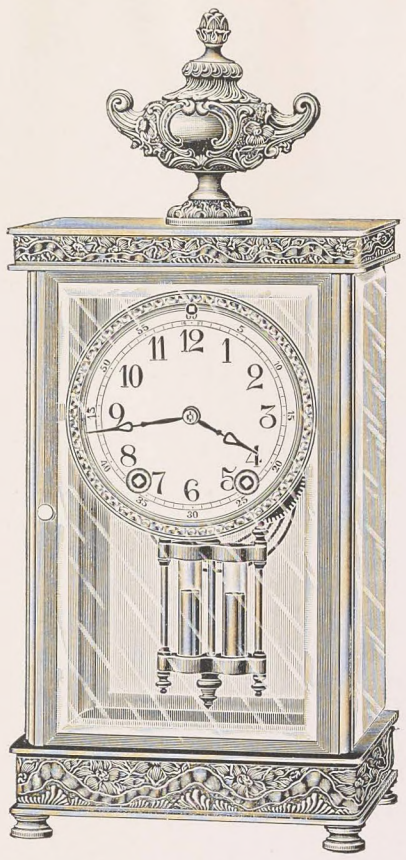
Empire No. 14

Ormolu



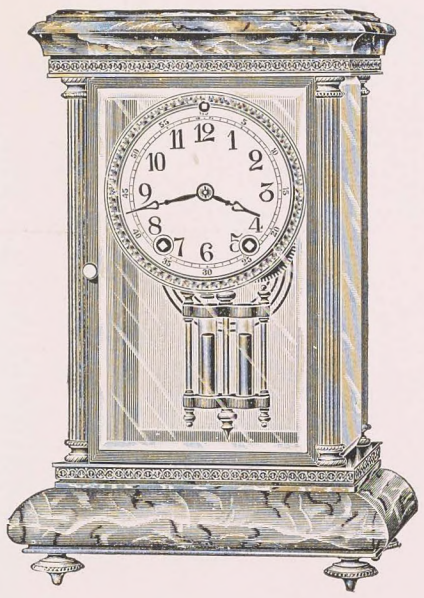
Empire No. 5

Embossed—Gilt



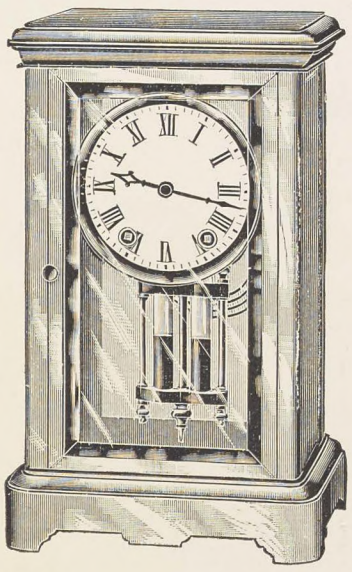
Empire No. 23

Brazilian Onyx Top and Base



We Make Seventeen Patterns of Empire Clocks

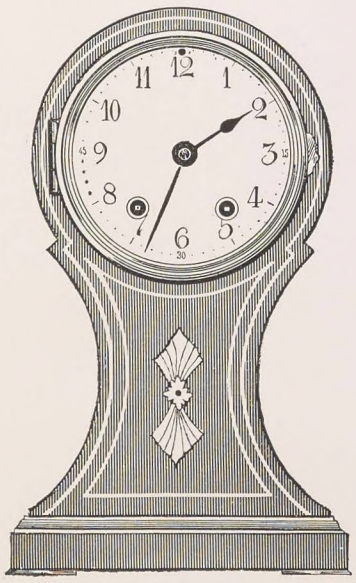
Orchid No. 5



We Make Four Patterns of Orchid Clocks

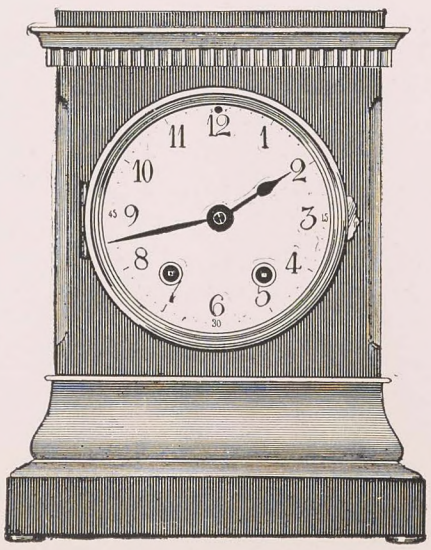
Parma

Mahogany with Marqueterie



Wales

Mahogany or Golden Oak

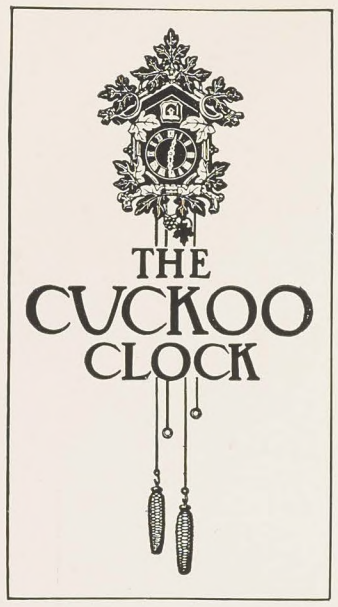


We Make Twelve Patterns of Fine Cabinet Clocks

Our new catalogue No. 646 was mailed October 1st. Dealers who have not received it can obtain a copy upon application

SETH THOMAS CLOCK CO.

70 Wabash Ave., Chicago **51 Maiden Lane, New York**

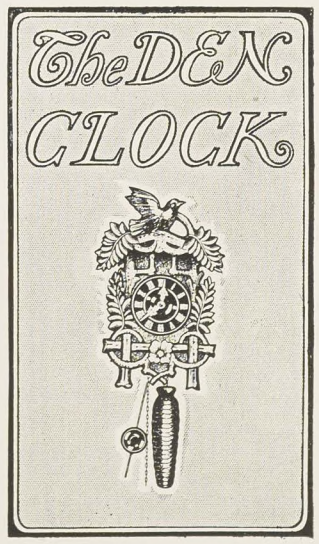


A Free Booklet to Help you Sell our Cuckoo Clocks

We reproduce here in miniature the cover page of a booklet we have just prepared to help you sell our Cuckoo Clocks. The booklet itself is 3½ x 6¼ inches, and its sixteen pages contain excellent reproductions of some seventeen of our best-liked clocks, with descriptions; besides an introduction which dwells on the desirability of owning a Cuckoo Clock and on some reasons why ours are best. If anything will sell Cuckoo Clocks this booklet will, particularly if distributed for the holiday season. Our Cuckoo Clocks appeal strongly to the seeker for unique Christmas gifts and this booklet will help you to many profitable sales.

Send for a copy of the booklet and our proposition.

A Folder About the Den Clock for Retail Distribution: Free



WE have printed a very attractive folder about our very attractive Den Clock. This illustration is a half-size reproduction of the cover page. The folder goes into details about the uniqueness and decorativeness of the Den Clock and particularly about the great big value it gives for the money. You ought to sell no end of our Den Clocks within the next few months and you can make it easier for yourself by letting this folder do the talking for you. Send for a copy and see how you like it. If you don't want to lose any time, suppose you send $6.50 for a dozen of the Den Clocks themselves.

American Cuckoo Clock Co.

Philadelphia

Festival Hall and Illuminated Cascade at the St. Louis Exposition

A Most Attractive View

But no more attractive than the view presented by the jeweler's trays when filled with an assortment of our Sellers; they will brighten up your stock wonderfully.

It is certainly not too early to stock up for the Fall. Everything you need in the way of watches, jewelry or diamonds. Special orders receive particular attention.

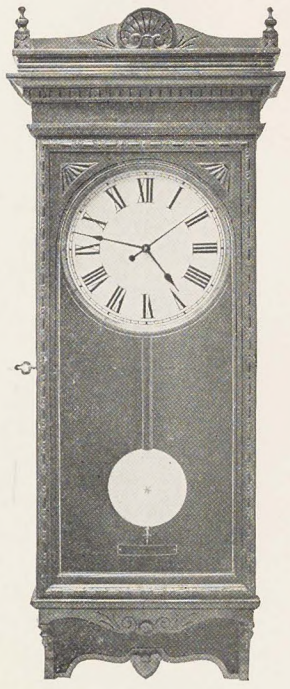
Henry Freund & Bro.

THE JEWELRY HOUSE

9 Maiden Lane **New York**

"SELLERS OF SELLERS"

Headquarters for Elk and Fraternal Order of Eagle Goods



No. 10

49 inches high
12-inch Dial

Nearing the end!

This *most popular of all* the

"Standard" Electric Clocks

will be sold at the *extra*-special price of

$12.50, net

until the number on hand is reduced to the number of the various other patterns yet unsold, in order that *all* the patterns may "run out" at the same time, in our closing-out-and-discontinuing sale of Electric Clocks. We need all the factory-room to make New York Standard Watches, and these splendid Clocks must be sacrificed to make that room.

This No. 10

is the top-notch of Clock manufacture, in goods selling below $50. It is absolutely unequaled in all current stocks of manufacturers, at double the price.

The "Standard" Electric clock requires *no winding;* has *no springs* to break, *no weights* to fall; is so *simple* and *mechanically perfect* as to make repairs unnecessary; requires *no outside connecting wires*, but is run by a dry battery (such as is used for door-bells, etc.), concealed within the clock-case, the average life of which is eight or ten months, and which can be renewed for eighteen cents by any local dealer in electrical supplies; is the *most accurate* of all clocks; and is beautifully cased in selected woods.

No. 10 was *always* preferred to *all* the other patterns, when offered at the regular price. At the *extra-special* price it is the greatest bargain we have ever heard of, in Clocks.

Only a few dozen to be sold at this price. "There's danger in delay"

We sell these Clocks *direct* to the Retail Jeweler

New York Standard Watch Co.

Jersey City, N. J.

Prices, Values, Guarantees—and Common Sense:

Some Big Facts Told in Small Type

It's *what price stands for* that makes it "high" or "low."

You buy, say, a suit of clothes "guaranteed all wool" for $20; yet you could buy another suit, similarly "guaranteed all wool" for $10. By comparison with the cheaper suit the price of the $20 suit seems "high"; yet you willingly pay the higher price and feel that you are getting the worth of the difference—you feel that the "high"-priced suit is really the cheaper. You keep in mind *what price stands for;* and you are not fooled by the guarantee on the second-rate suit ("guaranteed all wool") into believing that it is "just as good" as the better suit which bears an identical guarantee. You would probably not be fooled if the inferior suit were "guaranteed to wear forever."

Now, consider *what price stands for* in Filled Cases; consider, also, *what guarantees stand for* in Filled Cases; and reason it out with an open and candid mind.

We submit these propositions:

1. The price of a Filled Case is fixed by the intrinsic value of the materials put into it, the character of workmanship that goes into its construction, the quality of artistic skill in its decoration and finish, and the cost of marketing it.

2. A guarantee as to the length of wear of a Filled Case, *when* uttered in good faith, is based on the same values that fix the price of the case; and the probable length of wear can only be determined by actual *observation* of wear of the same kind of case through (and *to the limit of)* the guaranteed period.

Well: The price of a Boss Case is *not* fixed by the competition of inferior makes, but is fixed by

1. The greater gold value than its inferiors possess.

2. A superior quality of workmanship in the building of the case.

3. The employment of the very highest order of designing and engraving skill.

4 (in deduction). The economies afforded by largest purchasing power, least expense in distributing the product and minimum of fixed charges—by reason of which economies the price of the Boss Case is the lowest possible for the values in the case.

Consequently, another make of Filled Case, sold at the *same* price as the Boss, does not give the buyer as much for his money as the Boss: and of course a Filled Case sold at *lower* price than the Boss gives *much* less than Boss value. It is the difference between the two suits of clothes.

But the two suits of clothes are alike "guaranteed all wool"; and all other makes of Filled Cases are stamped with the same guarantee that appears in the Boss. Here is an absurdity on the very face of things: Something clearly not as good is guaranteed in *exactly* the same terms as a superior thing. The buyer is asked to accept fifty, or seventy-five, or ninety cents for his dollar; asked to buy a *speculation* in guarantees instead of a safe investment—for the Boss Case, tried through fifty continuous years, is guaranteed on the basis of *actual observation* of its wearing qualities, whereas *no other* Filled Case, in its present name, has been *made long enough* to be "tried out" through its guaranteed period and no prophet can say just how long it *will* wear. Inasmuch as the limit of guaranteed wear on the *proved* best—the Boss—has been fixed, not by arbitrary naming but by actual observation of results, it is absurd to fix the same limit *arbitrarily* on other makes which are confessedly inferior to the Boss in gold value and structural workmanship. The two suits of clothes are *not* equal, though their "guarantees" are.

Just stop a minute to ponder these facts.

The Keystone Watch Case Co.

19th and Brown Sts., Philadelphia

You can look right through the Skeleton Watch and get an *inside insight* from an *outside outlook* of the interesting whirligig of time.

The very newest thing in watches. The movement, handsomely finished in gilt, is skeletonized throughout, so that you can "see the wheels go round."

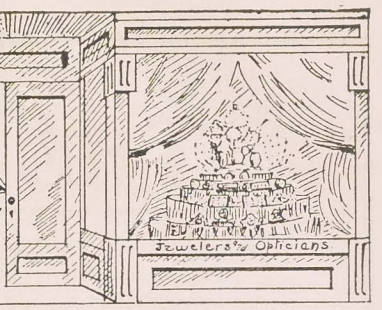
The crystals are especially ground to maintain the graceful, thin model form of the watch. It is lighter than the ordinary 18 size watch and is a handsome, interesting, fascinating pocket piece—a guaranteed timekeeper. Made with Nickel-Silver, Sterling Silver and Ten Karat 20-year Cases.

Put a half dozen of these in your window, with a group of "Elf" iridescent Enamel and Repousse Watches, above illustrated, *and it will attract every passerby who has a dollar to spare.*

NEW ENGLAND WATCH CO., Waterbury, Conn.

37 Maiden Lane, New York — 131 Wabash Avenue, Chicago — Spreckels Building, San Francisco

Modern Merchandising



A Jeweler's Method of Pricing

IT is scarcely necessary to say that figures are the most impressive factor in business. After all, it is prices that make sales. Though the day is undoubtedly passing when $4.98 had an irresistible fascination as compared with $5.00, there is still a sentimental difference between them which is out of all proportion to the actual two cents. It is because the store-keeper recognizes this that he uses the odd figure in his prices. Sometimes we see in advertisements alleged price reductions which are so sweeping as to be absurd, and yet they seem to impress the thoughtless public. It is a misfortune that even make-believe bargains blind the reasoning of many. "Derby hats, $1.50, formerly $3.50." "Tweed suits reduced from $18.00 to $8.00." Figures like these are familiar in department store announcements, and the credulous public will bite at the bait. A jeweler who evidently appreciates the impressiveness of figures sends us the following:

"I have noticed in your paper a number of complaints regarding the sending of catalogues by wholesalers to consumers, with consequent injury to the retail trade. In the past year or, in other words, since I started in business, I have had a hard time to increase trade and sell the right kind of goods, owing to the catalogue evil. I believe, however, that I have struck a good remedy for it. I noticed that quite a number, in fact the majority of people, like to get a big discount on the goods they buy even if the article is marked at $1.00, with fifty per cent. off, or the like, it seems to appeal to them. My plan is this: When I buy an article for which I pay, say for an easy example, $1.00, net, and wish to make $1.00 on it, I make the price of the article $4.00, and when a customer comes in and prices it, I show the price and say: '$4.00, less fifty per cent.; or half the price quoted, less ten per cent.'

"On a high-priced article I say: 'Fifty per cent. and twenty per cent.', and I have had several say, 'Why how can you do it?' Of course, I offer no lengthy explanations. 'Some goods,' I say, 'I get direct and can afford to price them so,' and I oftentimes talk as if that was the way the wholesalers do to show that I can afford to sell my goods at a profit similar to theirs. As you say, each jeweler ought to have a leader; well, I have used the diamond as a leader, and I believe I buy diamonds to good advantage. In selling I submit catalogue and the customer picks out a stone; I then send for a selection of several. I arrange the prices thus: One stone costs $50.00, net; I add fifty per cent. and fifty per cent., making it $100.00; ten per cent. more making it $110.00. When submitting the goods I say: 'There is fifty per cent. off the prices marked.' I make but ten per cent. and when the customer buys he has an idea that I gave him a 'come again' price and made little or no profit on the sale. Some leaving without having any idea what I made.

"That is the way I price all my goods—add fifty per cent. and fifty per cent, and give a discount of fifty per cent. and ten per cent. This as regards goods on which I wish to make forty per cent., but I always give the fifty and ten per cent. discount on everything; first figuring out and adding my profit, then adding the fifty and ten per cent. Thus the customer will be sure not to think: 'I wonder if he made fifty per cent. on this watch or pin.' Of course I cannot, as many jewelers advise in your paper, put an article in the window with a price tag on it, unless I put a conspicuous card in the window (which never looks good) stating all prices quoted are subject to fifty and ten per cent. off.

"Another scheme I am trying to put in operation is a small catalogue, or pocket price-list, in which I illustrate and describe articles after the manner of a large wholesale catalogue. When pricing goods I note cost; for instance, if the article cost me $5.00 and I wish to make $3.00 profit, adding, I find it $8.00; then add fifty per cent. and fifty per cent. and ten per cent. on it and list it at $17.60. I do this all the way through, then paste in a discount sheet stating that all prices quoted are subject to fifty per cent., or one-half off, less ten per cent. for cash, making it $8.00. Of course, on each page I have 'subject to the regular discount and cash terms,' so that everybody will notice the discount sheet. I believe this will continue to prove very satisfactory to my business."

Is this a commendable plan? Our correspondent says it has worked out well in his case, but there is one query that suggests itself. Does he lead his customers to believe that the fifty and ten per cent. are actual reductions from the regular price? In other words does he, in the case quoted by him, give the purchaser to understand that he has purchased a $17.60 article or an $8.00 article? This, we think, would have much to do both with the ethics and the success of the scheme. No plan of selling, however, effective immediately can be called successful which will prove a boomerang in the end, nor can any plan be recommended which implies a spirit of deception.

The Handsome Jewelry Store of M. L. Mantell, Syracuse, N. Y.

A Novel Advertisement

A COUNTRY so large and progressive as ours must naturally lead in the production of novel ideas for attracting trade. One of the most original of the many which have been brought to our notice lately is credited to a Macomb, Ill., merchant who offered a prize for the largest load of ladies brought to that city and unloaded in front of his store on a Saturday of last month. The prize load, the local press informs us, came from Good Hope on a hay rack, there being forty-one women in the load, drawn by four horses.

THE REASON WHY you should examine our LINES

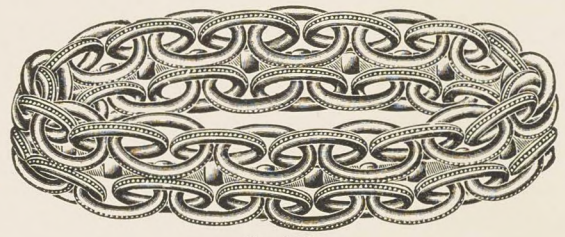
OUR GOLD FILLED CHAINS are only made in the highest grades, and our gold goods will assay as represented.

OUR DESIGNS are entirely original and up to date, and we do not copy from anybody.

FINISH is the best that can be produced.

Our lines comprise—GOLD FILLED Gents' and Ladies' Chains of all descriptions.

10 Karat GOLD CHAINS of all descriptions, and SCARF PINS, BROOCHES and LOCKETS.



No. 633.

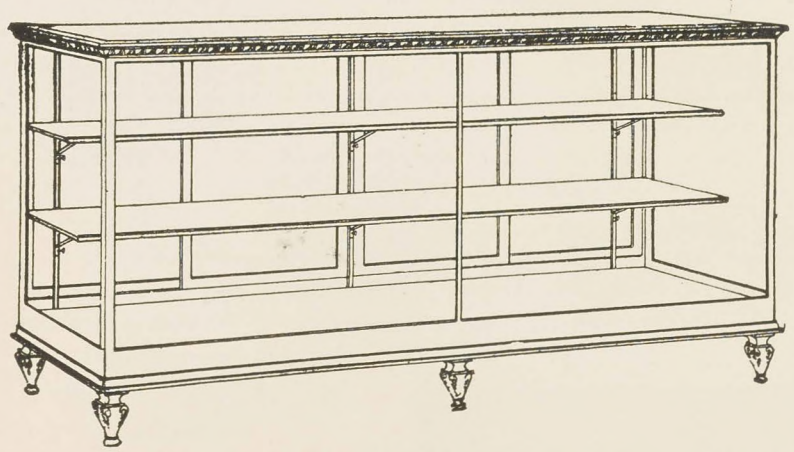
Full line of BEAD NECK CHAINS and CHAIN BRACELETS in Gold Filled and 10 Karat gold.

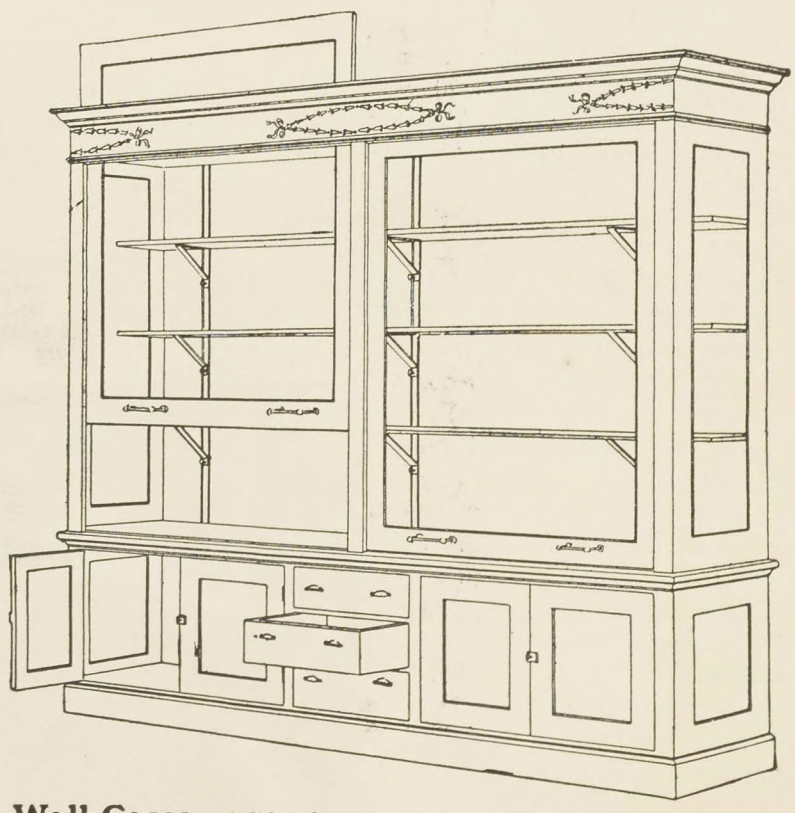
Also the famous adjustable **MARGUERITE BRACELET** (Patented June 18, 1901) in a large variety of styles, made in Gold Filled, Sterling Silver and 10 Karat Gold. Plain, chased, with signet, locket tops or jewels. Display cards and illustrations sent free on application.

PROVIDENCE STOCK CO.

Salesrooms { New York Office, 11 Maiden Lane
Chicago Office, 131 Wabash Ave.
San Francisco Office, 115 Kearny St.

Factory, 100 to 106 Stewart St., PROVIDENCE, R. I.





The Phenomenal Sale of this Case Proves its Usefulness

Jewelers with a keen eye in every case relating to their business, saw at once the beauty, utility and cheapness of our **"IDEAL" CASE.**

It is made of solid oak, or other wood desired, highly polished, beveled plate-glass top, double strength glass front, ends and doors, has two highly polished shelves of same wood as case, supported by Tom's adjustable brackets, metal legs six inches high, and doors run on steel tracks.

DIMENSIONS :—Length as ordered, 28 inches wide, 43 inches high, upper shelf 12 inches wide, lower shelf 16 inches.

The construction of this case is first-class. It has a nicely molded top, ornamented with egg and dart.

A BEAUTIFUL CASE

Wall Cases. **Solid Oak.** 8 feet long, 8 feet 5 inches high, 1 foot 4 inches deep inside. Doors slide up, fastened to Morton's steel chains and weights. Inside of case and shelves lined with black felt. Made to ship in the knock down.

Net price, $58.00. **Worth $70.00**

Made and Sold by **Union Show Case Co.** 105 E. Lake Street, CHICAGO, ILL.

FACTORY—56-66 Frank St., and 424-428 Maxwell St.

Stringent New Provisions in Canadian Tariff Law

The provisions of the law passed by the government of Canada for the regulation of the price to the consumer, of goods imported into that country, have been disseminated by the customs' department of the Dominion. This law seems designed primarily for the protection of home manufacturers against unfair competition from the imported surplus products of other countries, but in its working it should likewise insure for the native producer advantages equal, if not superior, to those of any outside competitor. The law provides that where imported dutiable goods, of a kind manufactured in Canada, are sold at a price below the fair market value of such goods as sold for home consumption in the country of export, there shall be levied thereon in addition to the ordinary duty, a special duty equal to the difference between the selling price and the fair market value in the exporting country, provided that such special duty shall not exceed one-half of the ordinary duty. Iron and steel are subject to special provisions.

To facilitate the operation of the law, importers are required to deliver to the Custom House invoices in duplicate with bills of entry for all imported goods. One copy is to be forwarded to a special check branch at Ottawa, where all invoices will be closely scrutinized and compared. Each invoice is required to show in one column the actual price at which the articles have been sold, and in a separate column the fair market value as sold for home consumption. The department has prepared a form of invoice which it is intended shall be adopted by all exporters to Canada, specimen copies of which are furnished at the custom houses. The form of certificate hitherto required on all invoices, has been succeeded by one fulfilling the following requirements:

"That the said invoice contains a true and full statement showing the price actually paid for, or to be paid for, such goods; the actual quantity thereof, and all charges thereon. That the said invoice also exhibits the fair market value of the said goods at the time and place of their direct exportation to Canada, and as when sold at the same time and place in like quantity and condition for home consumption, in the principal markets of the country whence exported directly to Canada, without any discount or deduction for cash, or on account of any drawback or bounty, or on account of any royalty actually payable thereon, or payable thereon when sold for home consumption, but not payable when exported, or on account of the exportation thereof or for any special consideration whatever."

In this connection there is another stipulation as follows:

"That no different invoice of the goods mentioned in said invoice has been or will be furnished to anyone; and that no arrangement or understanding affecting the purchase price of the said goods has been or will be made or entered into between the said exporter and purchaser, or by anyone on behalf of either of them, either by way of discount, rebate, salary, compensation, or in any other manner whatsoever, other than is shown in the said invoice."

The form of declaration required to be made by foreign exporters, and the oaths to be taken by importers when making entry of goods, has been subjected to provisions no less stringent and comprehensive. Technically, the law becomes operative on October 1st, but in order that ample time may be given for the dissemination of notice of these changes among exporters abroad, discretionary powers have been given to collectors of customs, by virtue of which they may for a temporary period after that date, but not later than December 31st, accept entries on invoices bearing the old form of certificate. After October 1st, however, duplicate invoices must in all cases be delivered, and to facilitate this importers may make copies of the original certificated invoices. The department has assigned officers to obtain complete information regarding the values of foreign goods in the countries of their production; this, of course, being essential to the efficiency of the law.

Canadian Jewelers Unite Against Unfair Competition

A meeting of the jewelers section of the Retail Merchants' Association of Canada was held in Toronto on September, 8th, W. J. Sheppard presiding and E. M. Trowern officiating as secretary. The topic-in-chief at the meeting was the competition of department stores. Resolutions were adopted urging all jewelers to organize for the purpose of suppressing unfair competition, and it was declared that in order to determine who are to be regarded as competing unfairly, a minimum percentage should be added to the cost of staple lines, and any one selling below this standard should be regarded as unfair. A committee to complete the work of organization was appointed as follows: W. C. Forbes, St. Thomas; W. J. Sheppard, Toronto Junction; A. Gibson, Peterboro; A. Boyd, Ottawa; G. S. Klein, Hamilton; J. S. Smith, St. Catharines; L. Atkinson, Newmarket, and Charles Carnegie, J. I. S. Anderson, W. S. Johnston, W. J. Mitchell and W. H. Black, all of Toronto.

Jewelry Exhibits at Canadian Expositions

During the month of August, Winnipeg, Canada, was the scene of the Dominion Exhibition; which event, in scope and attendance, surpassed any similar function previously held in that city. One of the displays at this exhibition, of especial interest to the jewelry trade, was that of the American Waltham Watch Co., presided over by B. B. Treen, the company's representative. This exhibit consisted principally of an immense watch movement, manufactured in such a way as to show to the public the construction and working of its different parts. It was kept running during the entire exhibition and proved an attractive feature to the public. During the continuance of the exhibition a lecture was given at Winnipeg on "Modern Watchmaking," by Mr. Duncan, the Waltham Company's expert. The jewelry trade of the West were invited and a large number of them attended.

The Canadian National Exhibition which was opened in Toronto in August, and is in progress at this writing, is a no less interesting function and so far has been gratifyingly successful. It is proving the mecca for large numbers of visitors, and being solely national in scope, as its name implies, it possesses a particular interest for citizens of the Dominion as illustrating the resources of that country, the extent of its productive activities and its present stage of industrial development. In the exhibits the jewelry trade of Toronto makes a notable showing. A large stand in the Manufacturers' Building is occupied by Ambrose Kent & Sons, Ltd., who have on display a line of high-class jewelry, including a $4500 diamond necklace, with pearl pendants and opal clusters in the center; a pair of steel-blue white matched diamonds of 9¾ carats, valued at $3600; and a tiara of diamonds and pearls of scroll design, detachable in three sections, worth $4200. This concern has also on exhibit a choice selection of souvenir spoons, brooches and belt pins in enameled sterling silver, ornamented with patriotic designs. The display likewise includes five French bronzes and Italian marbles, a choice assortment of watches and a large display of Masonic and other secret society regalia and jewels. A unique article included in this firm's exhibit is a large jewel, octagonal in form, made out of wood in mosaic work.

Ryrie Bros. display comprises a $20,000 necklace of Oriental pearls; a smaller necklace of pearls valued at $8000, and a pearl collar comprising twelve strands of small pearls united by five bars of diamonds, this piece being valued at $3000. The diamonds shown include a necklet of blue-white stones, with a pendant in the form of a Maltese cross, the whole being worth about $7000; a handsome tiara and necklet combination, value for $950; a large diamond crescent, value for $825; a pendant of diamonds and emeralds, worth $1350, and a rare black diamond set in a ring, rated at $575; a star sapphire, mounted in a chain of antique fashion as a fob charm, is shown as well as a $600 brooch in the form of a crown of emeralds and diamonds. In this firm's assortment of Dresden china is a handsome vase in dark blue and rose, embellished with a female head, by Gioventu. A choice array of silver goods is shown by the Standard Silver Co., of Toronto. This includes a loving cup about 35 inches high, the base being finished in French gray, with scroll work on the rim. There is a curling trophy of interesting design, a lacrosse trophy notable for the massiveness of its center bowl, and there is an epergne of artistic design, in the center of which is a figure of Cupid holding up a long, narrow vase. In addition to the foregoing, this firm's display includes a line of ingenious novelties.

Store Protection from Robbers

In a recent issue of the Chicago *News*, Theodore B. Wells has the following to say in regard to store protection from thieves and hold-up thugs:

"Storekeepers of this city can protect themselves from hold-up men without much expense. I know a jeweler in the East who has his store completely protected by having push buttons secreted in every part of it. These are connected with the nearest police station. Some of the buttons are not over six inches apart. They are on the floor as well as under the counters, and form part of the moldings on his show cases. He can show you any of his goods, and at the same time his foot or knee would be in easy reach of one of these buttons. He also has an arrangement, should he be showing watches or a tray of rings and should miss one, by which he can push a button that drops a bolt on the front door and the suspected person is locked in. In the meantime he may be calling the police station with another button. Should an attempt be made to hold him up, he could hold his hands high above his head, yet his foot would be pushing a button that would call the police.

"I have often wondered why such a method is not adopted here. What would the expense amount to if you saved yourself from a big loss? More than half the hold-up men that enter the business houses would be caught by this plan. Were I an electrician I would make this a paying branch of my business, as few business concerns would hesitate to protect themselves. We think nothing of the expense of insurance premiums after the fire. We would think nothing of the expense of protecting ourselves in the above manner should it save us, perhaps, hundreds of dollars."

ESTABLISHED 1854 INCORPORATED 1893

JUERGENS & ANDERSEN CO.

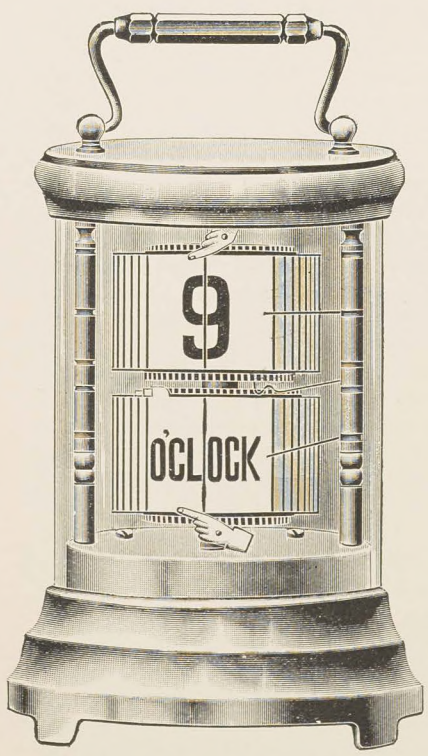
DIAMONDS, PEARLS

MAKERS OF FINE JEWELRY

92 TO 98 STATE STREET

CHICAGO

23-25 LOOIJERSGRACHT, AMSTERDAM, HOLLAND



"A REVOLUTION IN COMPUTING TIME"

From the Sun Dial, Hour Glass and Present Dial Clock
to the Famous

"Ever-Ready" Plato Clock

AN IDEAL TIME-TELLER WITHOUT HANDS OR DIAL

The Plato Clock tells the time at a glance, and, as the hour and minutes are shown in figures, no mistake is possible. It is wound, set and adjusted like any other clock, keeps perfect time and will last indefinitely.

Only the highest class of material and workmanship is employed in their manufacture, and the works are protected by a neat glass globe. The frame is highly artistic and ornamental and in fine gold finish.

A few of these clocks with the motto "Watch the Time Fly" make

AN IRRESISTIBLE WINDOW ATTRACTION

for the jeweler and sell as quickly as shown. The upper plate in the illustrations shows the hour and the lower plate the minutes. The change of the figure every minute on the lower plate is very catchy and impressively suggestive of the flight of time.

The plates can be had in any color—white, red, blue or dark green. In ordering, specify the colors desired.

Retail Price, $6.00. Write for Discount

American Electrical Novelty and Mfg. Co.

304-314 Hudson Street, New York City
Chicago Address, 184 Lake Street

Advertising Among Jewelers

THERE are two ways in which advertising may be continually changed—in matter and in form. Continual change of matter is imperative, but a change of form may or may not be desirable, according to circumstances. Many advertisers use the same style of border and the same styles of type for long periods, changing the reading matter only. This is good advertising because the same form of advertisement in the same part of the paper each day gives the advertisement a peculiar prominence and familiarity, its very form suggesting, even to the casual reader, the name of the advertiser. We will illustrate our meaning by samples. Chas. E. Rose, an enthusiastic and able advertiser of Telluride, Colo., always uses the following style, the matter being changed daily :

"If you buy it of Rose it's all right"

A Most Reliable Place

to purchase Good Jewelry, is the place where you know of whom you are buying—you have the assurance of a business reputation and guarantee that goes with every sale. Every article purchased of Rose proves its worth and the reliability of the store, and the customer always comes again.

"You have the most accommodating store, Mr. Rose," said a lady customer the other day. "I always feel satisfied with what I get here," she added.

It is our idea of storekeeping to make people satisfied; they come again—they send others—we think it pays.

CHAS. E. ROSE
"The Jeweler"

Always your money's worth

The matter in Mr. Rose's advertisements is generally snappy and to the point, and the daily change gives him an opportunity to cover every detail of his business—goods, prices and methods. Another illustration of this method of advertising is shown in the advertisement of George McL. Presson, of Farmington, Me., an accomplished advertiser who has faith in printers' ink.

An Advertising Booklet

"A Year of His Life" is the title of a small, four-page booklet issued by James H. C. Snellen, of Strasburg. In developing this caption Jeweler Snellen drives home to the reader in crisp, pithy phraseology the reliability of his guarantees. "One year ago," he states, "we told the good people of this neighborhood that they could rest assured that we would be here a year hence to back up all of our guarantees. How well that promise has been carried out, this, the second book, will attest." The booklet exploits watches, watch repairing, etc., and the wording, which is colloquial in some particulars, seems calculated to favorably impress the average reader. If the style of this book were not in itself an evidence that Jeweler Snellen's advertising is successful, the following excerpt from it should be sufficient proof of this: "We are here to stay and are looking for a suitable lot on which to build a modern jewelry store. This means two distinct things, namely: That we have treated our customers right in the past, thereby proving worthy of their patronage; and that we will see to it that they have the same courteous and just treatment in the future." The subject matter of this book breathes a spirit of honesty and candor that appeals favorably to the reader and leaves a good impression.

Display not Always Necessary

While most advertisements are displayed, it should be kept in mind that display is not always a necessary feature of good advertising. An announcement in the form of plain reading matter may often be more effective than a display advertisement, especially in the case of local weeklies and dailies in small towns, where the paper is generally read from end to end. An illustration of this absence of display will be found in the following advertisement of Gilbert Bros., of Greymouth, New Zealand, one of our subscribers on the other side of the globe :

That Watch of Yours

is in many respects similar to a railway engine. Let an engine be run without oil or cleaning and before long it will stop dead. Upon examination, it will be found that the friction and wear and tear has ruined the machinery, and it is fit only for the old iron heap. Likewise your watch: you put it in your pocket and while there is a kick in it, you, in your mistaken economy, do not consult the watchmaker and consequently rob your watch of years of good service and also much of its former accuracy. The time-keeping qualities of a good watch are maintained and often improved by timely and skilful attention.

A reliable watch is a faithful friend; your reputation largely depends upon promptness and punctuality in your private and workaday life, and you cannot practice this virtue without a reliable timepiece.

The maintenance of our business and high reputation is dependent upon the putting of our best efforts into every watch left with us.

We repaired over two thousand watches last year—a direct result of faithful workmanship.

If you want your watch to be true to you, you must be true to your watch. Bring it to us to-day. Every watch repaired at our establishment is guaranteed for one year.

GILBERT BROS.

Surrounded as it was by display advertisements, the Gilbert Bros.'s plain announcement necessarily attracted much attention and the argument presented is sufficiently forceful to impress the reader. As an evidence of the free notices which can often be secured from the newspapers in return for advertising patronage, we reproduce a paragraph from the same issue of the paper in which the Gilbert Bros. advertisement was printed :

> The advantages of having your watch kept in thorough repair are explained by Messrs. Gilbert Bros., in a paragraph over to-day's leader in this paper. Most people carry watches these days and are always interested in knowing where they can get the best workmanship at a minimum of cost. This firm recognizes that if a watch is worth repairing, it is worth doing well, and by working on these lines they have established themselves as first-class and reliable watchmakers.

DO YOU KNOW

that a twenty-year guaranteed gold filled case wears better than a solid gold case? Do you know that it stands more hard work and protects a movement better in most cases? Gold filled cases are to-day made with a skill and perfection that is marvelous. They wear as well as gold as far as appearance goes, and wear much better in practical service. I keep a large variety of the best cases made, and they are protected by an iron-clad warrant.

GEORGE McL. PRESSON, Jeweler

The jeweler should always make the best bargain he can with the newspapers, insisting on good position, careful setting, etc., and he should see that his contract is carried out to the letter.

He should also insist on seeing a proof of each advertisement before it is sent to press, as there is much careless proof-reading on daily and weekly newspapers, and a misspelt word or an ungrammatical sentence must necessarily detract from the dignity, if not from the value, of any announcement. If the jeweler gives much business to his local paper he and his brother merchants should see to it that the newspaper man does not accept advertisements which are hurtful to the local trade. Local merchants have a perfect right to exercise a consorship over the local paper as far as its advertisements are concerned, and it is the duty of the local press to protect its clients.

YOU
CAN SECURE THAT
CLASS PIN ORDER
BY SHOWING
OUR DESIGNS AND SAMPLES.
WE ARE HEADQUARTERS.
WRITE TO EITHER FACTORY.
WENDELL & COMPANY,
93, 95 AND 97 WILLIAM ST.
NEW YORK.
57 WASHINGTON ST.
CHICAGO.

Court Decision Protects Trade Name "Elgin"

THE suit brought by the Elgin National Watch Company to restrain Theodore O. Loveland, James L. Records and Chas. W. Harrison, who jointly conduct the Elgin Jewelry Co., from the trade use of the word "Elgin" was decided some weeks ago by Judge Reed in the United States Circuit Court, Cedar Rapids, Iowa. Complainant contended that the defendants used the name "Elgin" in order to lead the public to believe that the defendants' goods were products of the Elgin National Watch Company, and that there was a trade connection between the two concerns. To the complainant's petition asking for a preliminary injunction restraining defendants from using the word Elgin, defendants filed a demurrer on the grounds (1) want of equity; (2) that complainant had a complete and adequate remedy at law; (3) that there was a defect of parties to the suit, in that the Elgin Jewelry Company was an indispensable party thereto, and was a corporation of the same State as complainants, and the court was without the jurisdiction of the Elgin Jewelry Company; (4) that defendants had no interest in the subject-matter of the suit, the Elgin Jewelry Company being alone interested therein.

The decision rendered fills a twenty-three page pamphlet; it reviews the evidence exhaustively, and a reading of it would seem to prove that the attempt of the defendants to appropriate the word Elgin for the purpose of profiting by the significance which had been established for it by the Elgin National Watch Company was premeditated and deliberate.

First of all the decision overrules the defendants' demurrer after extended argument. The second point in the case—the prayer for a preliminary injunction to prevent the defendants from using the word Elgin—involved the question of unfair competition and the use of geographical terms in trade-marks, and this the judge also discusses in detail. He cites the acts of the defendants bearing on the question and quotes letters to prospective salesmen to show the purpose for which the word was used. He also shows that from the time the word Elgin was appropriated by the defendants the Elgin National Watch Company began to receive complaints from people who, in dealing with the defendants, believed that they were dealing with the complainant. A novel and suggestive plea of the defendants' was that they conducted an office in Elgin for the sole object of receiving mail. In this connection the judge quotes the affidavit of Martha Willson to the effect that she was in sole charge of this office, whose imposing dimensions are declared to be 12 x 14 feet. No stock was kept in this institution, nor had it any *raison d' être* other than the function of re-directing orders to Iowa City, mailing circulars to the trade and replying to complaints and countermands. Furthermore, according to Miss Willson's deposition, a great many letters were received at this office from people who seemed to believe that they were addressing the Elgin National Watch Company. Neither the affidavit of Miss Willson nor the aforesaid letters were disputed or denied by the defendants.

The decision then continues in part as follows: "Upon some of the letterheads used by the defendants is the figure of a watch with the name Elgin upon the dial, substantially like such figures in much of the complainant's advertising matter.

"Discussion cannot make plainer, nor obscure, the purpose of the defendants in adopting the use of the word Elgin as a part of their name and business style; in establishing a mail station at Elgin, Ill., as stated by Miss Willson; and the whole conduct of their business; to prey upon the good will of the complainant, and to exploit, sell, offer for sale, and palm off their own jewelry as the product of the complainant's manufacture, and to deceive buyers to so believe and to purchase the same as such.

"Defendants in no way attempt to dispute the main facts shown by the complainant; they deny any fraudulent intent in the use of the word Elgin, and say that their attempt to incorporate in Illinois was in good faith; that they intend to locate at Elgin as soon as they can make the necessary arrangements to move their property there; that the failure to file the articles of incorporation with the Recorder of Deeds of Kane County, Ill., was an oversight; that they have discontinued the use of the figure of the watch upon their stationery, and added to their printed matter the words, 'Not connected with the Elgin National Watch Company.' These changes were made since the commencement of this suit; and they claim the right to continue the use of the word Elgin as a part of their trade name as they have been using it. They further say that March 24, 1903, in August, 1903, and again January 7, 1904, they instructed their salesmen not to represent that the Elgin Jewelry Company was in any way connected with the complainant, or that their product was the product of the complainant. This is but an added reason why the defendants should abandon the use of the word Elgin as it is used by them, for by such use they place it in the power of these salesmen to continue to deceive and confuse buyers and defraud the complainant.

"It is urged that the business of the defendants as conducted by them is not in competition with that of the complainant; that complainant manufactures watch movements only; that defendants do not manufacture watch movements, but confine their business to sale of watches, jewelry, etc., upon mail orders only.

"If a watch or watch movement, however, is not included in the general term 'jewelry' it is so closely associated therewith that the public in general regard the dealing therein, as a part of the jewelry business, and they are generally handled by jewelers, and, in fact, are a branch of the jewelry trade. This is clearly shown by complainant's proofs, and it is plain therefrom that the continued use of the word Elgin by the defendants as used by them is liable to and will confuse and deceive buyers quite generally and lead many to believe that the jewelry sold and offered for sale by defendants are those of complainant's manufacture; and that defendants are using this word as a part of their trade name to palm off upon the public their own jewelry as the product and manufacture of complainant; and that this will cease only when such use of said word ceases.

"It is asked in the prayer that the defendant be restrained from completing the organization of the Elgin Jewelry Company in the State of Illinois. The incorporation of a company of that name has been authorized by the proper authorities in Illinois under the laws of that State, and the filing of the certificate thereof and of its articles of incorporation in the proper county appears to be the only thing lacking to complete that organization. This of itself is not unlawful. To prevent such completion would necessarily affect the proposed corporation so authorized.

"The conclusion therefore is, that the proofs show *prima facie* that a preliminary injunction should issue against the defendants as prayed for in so far as their jewelry and watch trade is concerned, but not as to the completion of the corporation in Illinois. Upon the giving of a bond by the complainant in the penal sum of ten thousand dollars, with sureties to be approved by the clerk of this court, a preliminary writ of injunction may issue to the extent indicated."

Clock Golf

The globe trotters moved silently and swiftly in an electric launch over a moonlit mountain lake.

"What," said one, "is the most beautiful game in the world?"

"Polo," another answered.

But the rest declared positively that clock golf, as a beautiful spectacle, went far beyond polo and every other game.

"Clock golf," an old man said, "is only played in the evening on the lawns of the great Florida hotels. I first saw it on a Christmas Eve.

"I sat under the stars in the garden smoking a cigar. The lawn was like green velvet under my feet, and oleanders glimmered in pink and white masses in the starlight. The air was perfumed with flowers. The breeze that stirred the palms was like the breeze of a June night.

"In a blaze of electric lights a half dozen young women, the wives and daughters of Northern millionaires, played clock golf on the grass. They moved with slow grace here and there. Their gowns were pale. From their fingers, their arms, their throats and their corsages came twinklings and shimmerings and little sudden flashes of innumerable jewels.

"In clock golf a dial is marked out, and on this dial the twelve figures of a clock are indicated by red and blue and white lights. At each light a player stands, and the object of each player is to get her ball with the fewest possible strokes into the single hole that is near light number twelve on the dial.

"At all the sumptuous Florida hotels clock golf is played, and, playing it, young women wear their most splendid gowns and their most brilliant jewels. It is fine to see them, in the bright light and the soft air, moving gracefully and quietly amid the odor of flowers, the swaying of palm trees and the glitter of diamonds."

How the Drummer Guards his Samples

The New Orleans *Times-Democrat* is responsible for the following story of a thief-proof sample trunk:

A traveling jeweler, who finds it necessary to carry a large and costly line of samples with him, has hit upon a novel and eminently practical expedient for protecting himself against robbery.

It consists of nothing more complex than a storage battery feeding into a steel plate on the handle of his grip. As soon as an uninsulated person touches it, he promptly goes up in the air. The drummer himself wears an insulating glove. This is a good thing for travelers carrying light bags and worried at stations by liveried porters trying to take their bags away from them and carry them for a quarter.

"I feel that The Keystone is as important in my business as a pair of tweezers on my bench."
W. F. Hackett, Jeweler, Rochelle, Illinois.

DIAMONDS

LOOSE AND MOUNTED

JOS. NOTERMAN & CO.

509-511-513 RACE ST. CINCINNATI, OHIO

A FEW FACTS

It is a fact that we make **"THE BEST"** Fobs.

It is a fact that for style, finish and quality they lead.

It is a fact that they are great sellers.

We also wish you to remember the fact that we make a line of fine Seamless Gold Filled Vest, Guard and Neck Chains, Chatelaine Pins, Bracelets and Lockets.

BATES & BACON

Attleboro, Mass.

New York Office
9 Maiden Lane

Chicago Office
103 State Street

The Show Window

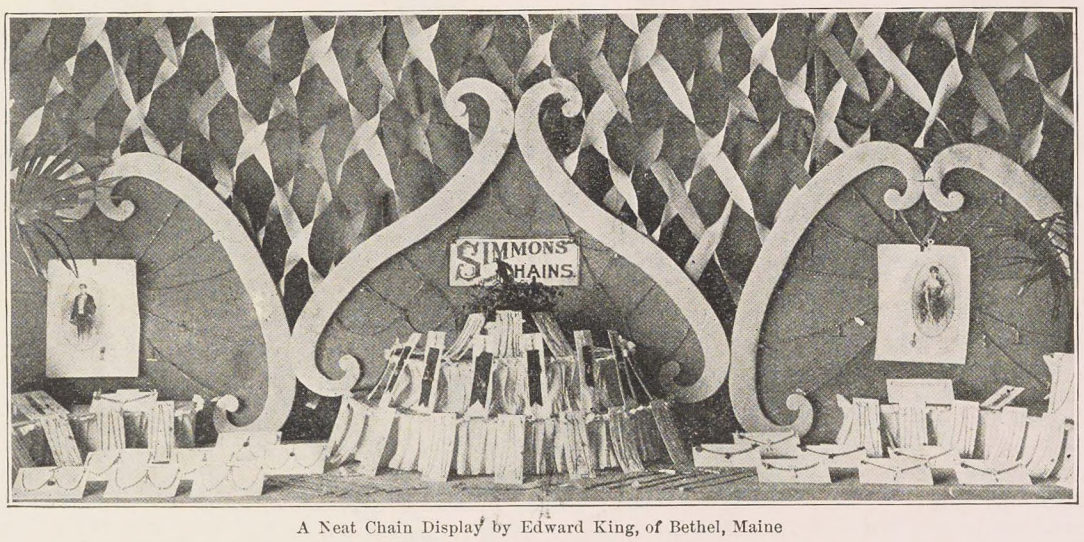
Education in the Show Window

When progressive retailers first began to develop the window display idea they little dreamt that they were solving an important educational factor, for such the show window has proved to be. The window exposition as a field for study in high art is well set forth by a shrewd observer in an interview published in the New York *Sun*. He said:

"The store windows of New York are a liberal education in themselves, and it makes me angry each day to see the heedless way that people pass them by. If New Yorkers studied them they would be the most artistic people in the world. Indeed, as a people, and estimating them by their homes, they are the most artistic; and no doubt the store windows have a great deal to do with it, though, as I say, not half the attention is paid to the windows that they deserve.

"Of course, I mean the high-class windows—Broadway, Fifth Avenue, part of Sixth and various cross streets. Every one knows where to find the good ones, and just think what you can find in them! You can absorb as much artistic brain food in half an hour's stroll as you could in the same time spent in a museum, or very nearly.

"I don't mean the pictures alone, though there is no dearth of them—noble oil paintings, finished reproduction of great works, etchings, water color sketches, prints, old aud new—why, a man who kept his eyes open might become a connoisseur of no mean skill by spending a little time every day with his nose to the picture shop panes. He could study the sentiment of the works. He could master the methods of form and color portrayal, grasp the styles of the leading artists just as well as if he visited picture galleries or owned a collection of the works of the best artists.



A Neat Chain Display by Edward King, of Bethel, Maine

Great Variety of Art Goods

"But, as I said, it is not pictures alone. In one window you will see a treasure of old silver, a wealth of antique porcelain; then you pass a block or so and the masterpieces of the modern gold or silversmith are spread before you for comparison. Next door perhaps you see displayed the triumphs of the modern potteries. Just think of the down-town streets running into City Hall Park as a field for the study of ceramics.

"Then there is the furniture, ancient and modern, carved wood, hammered iron, polished brass, damasks and brocades. Think of the carpets, antique and modern, that are spread out in a hundred windows; dreams of beauty from the looms of the East and of Europe. There is education for the eye in color and in the spirit of ornamentation. A man with a scrap of imagination can stand in front of a store window, say on Broadway, and from one of the exhibits he can build up before his mind's eye a vision of beauty and luxury—a Moorish palace, a Syrian mosque, a French chateau, an English manor house. Need a man travel when New York princes of trade put at his feet for free enjoyment the most artistic products of every period and every clime?

"I tell you few people realize the natural wealth expressed in the mere fact of being a New Yorker. We all own these things. What can the people who buy them do with them but look at them, and we can all do that freely and without limit.

"I only wish I saw the people at large taking more pleasure and more good out of their property."

Designs Symbolic of the Fall

Ingenious window trimmers sometimes find inspiration for suitable designs in the attributes of the different seasons, and the fall lends itself peculiarly to this purpose.

We do not mean, of course, that trims seasonable in the technical sense of that term should be attempted to the exclusion of all others. On the contrary, if the decorator can contrive displays which, while not strictly seasonable, are nevertheless more attractive and more effective as sales factors than any exclusively seasonable trim, by all means let him do so. There is a perennial attraction, however, in displays which portray with artistic effect the changes in the aspect of dame nature. "The spirit of the season" is an expression pregnant with soul and meaning, and to give an artistic symbolism to the idea, with a due regard to the primary end of all display—the stimulation of sales—affords an interesting theme for the skillful window artist. Judging from the use which decorators make of the autumn idea in their window work, and from the manner in which that season retains its popularity as a display motif, its associations must be peculiarly susceptible to representation of this kind. There is a strange, sombre significance amounting almost to a fascination, attaching to "the fall of the leaf," and if the trimmer can so typify it as to overshadow every suggestion of decline or unpleasant transition and at the same time lose none of the season's fleeting witchery, he will have succeeded so far as the artistic side of the design is concerned.

Suggestions for Trims

Even the harvests furnish many ideas for catchy trims. We remember seeing in a Minnesota town a window trim in which several different measures of wheat were placed; in conjunction with each measure was some article of jewelry with a card stating that the piece could be purchased for what the measure of wheat would sell for. Now that wheat has gone akiting over the dollar mark an idea of this kind could be worked out very suggestively.

An appropriate fall display could be contrived by erecting for a background an ornamental wood fence or railing with one double gate in the center and a smaller one at either side of it, the idea being to represent an entrance to a rural seat. These may be cut out of any kind of lumber. In this particular instance white, of course, has to play a part because it is especially appropriate. All parts of the fence and posts should be tightly covered with muslin and calsomined a pure white, and touched up if desired with gilt. This fence may be set about one foot from a scenic background, giving distance to the scene. At either side of the background place a stout tree branch partially denuded of its foliage. The floor should be strewn with fallen leaves. The sides of the window should be mirrored so as to give the display of goods, which may be arranged to suit in the foreground, a multiple effect. If the goods have been reduced in price a card may be placed where it can be easily read without conflicting with the artistic setting of the goods; it may bear some such inscription as this: "With the 'fall of the leaf' our prices have fallen. A welcome for you inside."

The design may be altered or elaborated in detail to suit individual requirements, and in this connection the average store clerk, if conversant with the dimensions and conformation of the window, should be brimful of ideas calculated to increase the selling force of the display, augment the coffers of his employer and consequently the value of his own services.

Window Trims for the Holidays

It is not too early even now to begin planning for holiday trade, and chief among these plans must be window trims. During the holidays at least the window leads as an advertising factor. It is the custom of holiday shoppers to examine the offerings of all the stores they can conveniently visit before buying, and many of them limit their inspection to the windows. See that there is something in your window to attract and hold the attention of the passing crowd of critical observers. Each of them is an earnest seeker after suitable gifts, and the window argument should be convincing. And here we may remark incidentally much may be done far ahead of the holidays to make your holiday trade a success. If you visit the city markets to make purchases advertise the fact. When your purchases are delivered make a suitable announcement of it. Make frequent reference to your preparations for the holiday season in your advertising literature.

On the market long enough to be the recognized leader. Costs no more than the old styles, but superior to them all.
But one quality. Always the best.

In the construction of these goods we use only the very best materials obtainable. The holders we make of the best grade of vulcanized rubber and the pens of solid 14 K. gold, iridium pointed.

Handsome show cases, signs, trays and advertising matter furnished without charge to our customers.

A FEW PEN POINTS

Ask your jobber for them or send to us direct for samples and prices.

Carry the line that pays you a good profit.
$7.50 per dozen for our No. 21A.
Send for our catalogue; it tells the whole story.

FRANK H. MOONEY & CO.

MAKERS OF THE MOONEY MODEL FOUNTAIN PENS

131 TO 137 WABASH AVE. **CHICAGO, ILL.**

Letters from the Trade

Readers are requested to send for publication new ideas on any subject, technical or mercantile, of general interest to the trade. As this page is for the use of individual readers, we do not hold ourselves responsible for the views expressed.—Editor The Keystone.

Practical Points in Watch Work

ED. KEYSTONE:—As a practical workman, with some theoretical knowledge of watchmaking, both at repairing and manufacturing branches, I naturally take keen interest in your Workshop Notes. On page 1253, of the August issue, is the following question: "Should a balance wheel vibrate freely without catching, when only balance and lever are in position if every part is adjusted properly?" You answer, "No."

Now, if a lever escapement is adjusted properly, the fork is neither too long or too short, the roller or safety action is correct, and with the banking screws turned into the proper positions, the balance and lever should and will vibrate without catching, though there may be no power on the train, as the train is not in.

On page 1255, of the same issue, is the question: "I would like to know what the actual damage is which comes from the use of steel or brass pins in place of roller jewels in medium-grade watches?" and you answer: "It is only a question of a few months when a watch that contains a steel or brass roller pin would require a new fork." I can't agree with you in this. Although I do not approve of putting in steel or brass roller pins under any circumstances, I know from actual experience that if a steel roller pin is well made and fitted it will give satisfaction for years. As far as friction is concerned I would call your attention to an examination of a Swiss (Chinese) duplex watch, where the impulse pins in the escape wheel (steel) strike a steel impulse finger on the balance staff, are never oiled by the best workmen; to all New England watches in which the impulse teeth of a brass escape wheel strike against a steel pin or pallet on the balance, are never oiled, and to the cylinder escapement where the friction is steel against steel altogether, always oiled. If a steel roller pin is nicely polished, also the slot of the fork, it will give fair satisfaction for a long time, but never use anything but a jewel pin.

Yours truly,

Waltham, Mass. J. FREISTADTER.

Advises Against Potassium Cyanide

ED. KEYSTONE:—In reading the answer to "Cleaning" in the Workshop Notes Department of your July issue, I notice that you recommend the use of cyanide of potassium; one ounce of the salt to a quart of water, the articles to be dipped in it for about five seconds. I take exception to the use of cyanide of potassium in such a strong solution; in fact, at all. Your plan of cleaning is all right, except as regards the cyanide of potassium solution; leave that out. I have worked some in the mines of California and Nevada, and know from long experience the effect of cyanide solutions on gold. Our best cyanide men on this Coast now use only two-tenths of one per cent. of potassium for a solution to collect the gold ore that contains from ten to fifteen dollars to the ton, and use no other process to obtain the gold. The cyanide solution takes up all the gold in that weak condition. Of course, the pulp is left in the solution from seventy to ninety hours; but consider two-tenths of an ounce to one hundred ounces of water, as against your solution, which has one ounce to thirty-two of water. My experience some years ago, with the cyanide solution for the cleaning of watches, led me to abandon it entirely, as no matter how quick you dip the gilt parts in and take them out of the solution, in three or four cleanings the gilt surface will all be taken off the movements. Cyanide of potassium is a powerful corrosive and very soon dissolves gold.

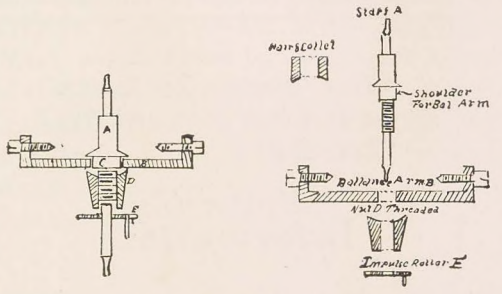
In watch cleaning, use only the benzine, gasoline and alcohol process.

Yours truly,

Los Angeles, Cal. R. H. WITHERIL.

A Balance Staff

ED. KEYSTONE:—I am sending you a drawing of a balance staff designed by me, and would



appreciate it if you would invite criticisms of its good and bad points.

Yours truly,

Corsicana, Texas. J. C. MARTIN.

Points on Watch Cleaning

ED. KEYSTONE:—The right way to clean a watch seems to be an unsettled question, with a diversity of opinions among the cleaners. The matter has been brought out at various times in THE KEYSTONE, of which I have been a reader since the time of its birth as a pink folder.

With the editor's permission I will add a few words to the discussion, which may bring up some new points for consideration by some of the younger generation of watchmakers. Personally, I have cleaned watches for more years than I care to remember, and so it may be taken I have had some experience and can rightly claim a knowledge of the requirements of a perfectly cleaned watch. Also, I am not tied down to any old-time ideas, but am still looking for better ways of doing our work.

On a large proportion of the work that comes to us the time element, in its relation to price received for the job, must be considered, and it certainly does take longer to wash and prepare and muss a little than it does to clean without washing. I use both methods, have facilities as handy as any one possibly could have them, and think I know. When a watch comes to me particularly dirty and greasy, the owner possibly having injected some kerosene or sewing-machine oil "to liven her up," or that is stained by age or neglect, then I use my cyanide solution and the washing process, having a large wide mouth, glass-stoppered vessel full of the solution beside my washstand. The cyanide solution I find indispensable, and use it every day for one purpose and another. It must, however, be used with caution, and a full knowledge of its effects, or it had better be left alone. There must be no chance of its getting into a crevice, under screws or attached parts on where it cannot be thoroughly rinsed off, as the slightest trace of cyanide remaining will set up corrosive action. A stained balance, for instance, can be made as bright as new; but it is a dangerous operation, to the balance, in careless or ignorant hands, without a knowledge of the corrosive properties of this poison.

So, while I do use the washing process at times and when I consider it the better way, for the most of my cleaning jobs I do not, and I claim that just as good and as nice work can be done with alcohol, chalk, brushes, pegwood and pith—and skill. The chalk should be a selected lump of raw chalk, hard and better if with occasional pieces of the original shells scattered through. Prepared chalk or the round cakes used by carpenters will not do. The chalk is not wanted as a scouring agent, but as a medium to keep your brush in condition. The brush is to be passed over your lump of chalk, which should be cut to fit a small wooden box or space in chalk drawer, then several times over the edge of brush or drawer, then apply to watch part. If your brush is right, the chalk will take up all the grease and dirt, which the brush takes from the watch and yet leave enough very fine chalk in your brush to do all that is needed and not enough to leave any lodged in sinks or crevices. There is no excuse for depositing or leaving chalk dust on any watch parts. When you have a nice new gilded plate in hand, instead of a lusty back and forward swing, give the brush a circular movement without advancing and there need be no chance of scratching. With just a little practice this can easily be done. An important requirement is the right kind of a brush, and in this lies the cause of most failures to get nice bright work. The brush as well as the chalk must be right, or the work will have a greasy, filmy look, instead of a clean, bright, lively finish—as it would have if washed. I have seen a lot of this greasy, clean work done, and some of my watchmaker acquaintances have wondered why they could not get nice, snappy looking plates, even with lots of chalk and energy. A stiff brush is needed, yet it must not be too hard. Such a brush must be prepared for its work, or else got in proper condition on coarser work, it cannot be bought just right. One or two of these brushes and a soft one for dusting are needed. If the matter is of sufficient interest, I will be glad to describe my method of getting up my brushes to the right condition for service.

The foregoing shows the method I use on all ordinary work, and I know it cannot be done to look better or cleaner by any process of washing. When set up, the movement is bright, thoroughly clean and no chalk left in pinion leaves or sinks. I do enough of the washing where it is needed to know both ways well, and on most cleaning jobs at $1 or $1.25 I don't want to use up any unnecessary time. However, it all depends on the right kind of accessories and on the man.

Yours truly,

Hackettstown, N. J. CHAS. WEBER.

Competent to Judge

ED. KEYSTONE:—I have been taking THE KEYSTONE from its first issue up to the present time. I am incompetent to suggest any improvement. It has grown to great size and interest, and each month I look forward to receive it. It is all of interest, including the advertisement display.

Yours truly,

Prescott, Ariz. C. B. LINN.

Mercantile Fountain Pen

In many new styles, in cabinet and show case assortments

No. 3 A retails **$2.00**

ACTUAL SIZE.

STERLING SILVER PENCIL HOLDER

The daintiest and most useful pencil holder yet made, and in the most convenient shape—nearly flat, in reality an oval flat.

Retail price—
Plain . . . $1.00
Chased . . . 1.50
Decorated Pattern, 2.00

Made and warranted by

AIKIN, LAMBERT & CO.

Nineteen Maiden Lane, NEW YORK

Manufacturers and Exporters of GOLD PENS, PENCILS, TOOTHPICKS *and* NOVELTIES

General Agents of PAUL E. WIRT

Get ready for the Fall trade with our Sample Sets, and thus you will prevent orders from being placed with out-of-town parties.

Wedding Invitations and Announcements

Our Sample Sets are the finest in the field

Write for information

Calling Cards and Monogrammed Stationery

WM. FREUND & SONS, 174-176 State Street, CHICAGO

Exclusively Copper Plate Engraving and Steel Die Embossing

The "MODEL" Fountain Pen

THE MODEL OF PERFECTION. **Retail Price, $1.00 to $10.00.** Made of finest grade rubber and fitted with a 14 K. Gold Pen. No extra charge for special imprint. Every pen guaranteed. Write for samples and prices. All makes repaired and returned same day received.

HERING & CO., 17-19 John Street, New York

SEND FOR CATALOGUE OF MASONIC AND OTHER SECRET SOCIETY CHARMS, JEWELS, RINGS, BADGES AND LAPEL BUTTONS.

SEND FOR CATALOGUE OF COLLEGE BADGES CLASS PINS AND SCHOOL MEDALS.

The C. G. Braxmar Co.
Manufacturing Jewelers
No 10 MAIDEN LANE
NEW YORK.
BADGES & MEDALS
A SPECIALTY.

SEND FOR CATALOGUE OF MILITARY G.A.R. ATHLETIC, SHOOTING AND SPORTING MEDALS.

SEND FOR CATALOGUE OF FIRE AND POLICE DEPARTMENT AND OTHER OFFICIAL BADGES.

THE "RIVAL" FOUNTAIN PEN

SPECIAL No. 1, plain and chased, assorted, $7.50 per dozen, net cash
A HANDSOME PLUSH TRAY, holding twelve pens, given with the first order of one dozen or more pens.

Send for catalogue. Export trade solicited. Send for prices and discount to the trade.

No. 6. Plain Barrel, Large Cap. Black or Mottled. Cut ⅔ actual size.

Ask your jobber for the "RIVAL" Pen

All pens are 14 K. gold. Every pen warranted.

Members of National Association of Manufacturers of U.S.A.

D. W. BEAUMEL & CO.

Office and Factory

All makes of Fountain Pens and Gold Pens Repaired **45 John St., New York City**

JOHN HOLLAND FOUNTAIN PENS

Lately improved with a **PATENTED FEEDING DEVICE**

Also makers of
Gold Pens, Fine Pen Holders, Pencils, Toothpicks, Thermometer Cases and Stylographic Pens.

THE JOHN HOLLAND GOLD PEN CO.

Established 1841 — **127-129 E. Fourth St., CINCINNATI**

THE SUCCESS OF THE PEN AGE

New Styles in Writing Papers

The return of the summer sojourners always infuses considerable activity into the stationery trade. The vacation season usually exhausts individual supplies of writing papers, and replenishing is a source of profit to the jeweler-stationer. No doubt by this time most of the readers of this department have been visited by the traveling salesmen, and have on hand a fresh supply of the new fall lines. It is fortunate, however, for those who have hold-over stock that there has been practically no change in style in recent months. The *American Stationer* says:

The Popular Writing Papers

Styles in writing paper and envelopes for the fall season have changed very little since spring. The fabric-surface papers, so popular for several seasons past, have increased the strength of their position very decidedly and, so far as present indications go, give promise of continuing extremely popular for some time to come.

In envelopes, however, some change of style, or, rather, a change in the request for certain styles, does not seem so unlikely. At present, of course, the wallet flap in some of its various shapes, is unquestionably the leader in the field, as it will be through the fall and holiday season. In a few cases, however, the leading manufacturers have packed the deep-pointed flap in their better grade boxes, and the trade has taken so kindly to the change that it can almost certainly be expected to be continued next spring.

New Fabric Papers

Though fabric papers have continued to increase in popularity so greatly, and though they are now considered the proper thing almost to the exclusion of other types. This does not mean by any means that no new papers have appeared for the fall season. It is true that new papers do not seem to have been so numerously announced as they were for the corresponding season last year, but new styles have been numerous for all that. Pretty much all of the new styles have been of the fabric variety and, inasmuch as these varieties have been so numerously exploited already, many of the newcomers could not well help bearing a strong resemblance to some makes already in the market, through branded with an entirely new name, and otherwise being given the earmarks of entirely new goods. These latter facts, however, are not sufficient of themselves to gain a so-called new paper much talk and advertising.

The original features of many of the new makes of fabric papers that have appeared have been confined more especially to making the textile lines lighter or heavier than varieties that have been shown earlier, and also to attempts at making the paper resemble an actually woven material more than before. Many manufacturers have had good success in this direction and while, perhaps, only few distinctly new fabric papers have appeared, the class as a whole has certainly been perfected and is now generally of a better quality and more attractive than it has ever been.

Shape of the Papers

The shape of the paper has shown less change even than the finish. The dimensions most popular continue to approach pretty nearly to a square, giving when folded the oblong shape that began to be shown a few seasons since.

Among the novelties the hemstitched effect continues to hold a strong place, though it is noticeable that less of the expensive papers are shown with it. A decidedly larger number of cheaper papers having it are shown, indicating that the fad is passing as far as the wealthier classes are concerned, and that it is being passed on to the large purchasing public. This lessening of the cost will undoubtedly be responsible for a considerable expansion in the demand from buyers who heretofore have not been able to afford hemstitched papers.

A late novelty of the hemstiched family shows a paper with its body in tints of gray or blue, and having an embossed frame colored white on the outside edges of the embossing. The color scheme is varied, of course, though in all cases the combinations make a very pretty and striking effect. A fair demand is already reported for these goods, and it is believed that this will show a considerable increase later.

For the elite trade hand-made papers, which began to be pushed by some of the leading manufacturers a short time since, have met with a fair degree of success. The price of these goods, however, necessarily high, has, of course, restricted their sale. Some good imitations of hand-made also have appeared, and the demand for these has, it is reported, been very good. The deckle edge on these goods has led to its introduction on even the cheaper grades of paper.

The Fashionable Colors

As regards color, a grayish white tint is in best demand. This is varied some by the different manufacturers, though the differences in many cases are difficult to distinguish. Cream follows, and then come various tints of blue and gray. Many other tints also may be had, but the demand for them is of a restricted order.

The popular shape of the envelope has already been intimated from the reference made to the shape of the note papers. The envelope is an oblong of almost exactly the dimensions shown last spring. In popular-priced goods it has the wallet flap almost exclusively, and in the higher grade goods it also, in the majority of cases, has the wallet flap, though occasionally here the deep-pointed flap has been introduced, leading to the impression in some directions that this sort of flap will displace the wallet to a considerable extent before long. Many fantastic shapes in flaps continue to be shown, but the number has not been added to appreciably since last spring. This strengthens the impression, which is gaining ground in some directions, that the pointed flap will before long displace the wallet flap."

Supplies for the School Children

A fruitful source of profit in stationery is the handling of school supplies, and as the school season has just begun, window displays especially should be rich in pens, pencils, blotters, slates, sponges, etc. School perquisites are also the cue to the stationery advertising of the month. The big stores are especially watchful of the opportunity. Those in search of good material for stationery advertisements will do well to read each day the announcements of the big department stores, and clip and preserve the portions that apply to their own specialties. A few sample sayings are the following:

Parents who are interested in the selection of their children's school books and supplies, will effect a considerable saving in outlay by purchasing them at Carsley's. Lists of the requirements of scholars attending any of the schools have been in our hands for weeks, and preparations are most complete for selling.—*S. Carsley Co., Montreal, Can.*

New school outfits for the children are the chief expense at this time in thousands of homes. Here that expense can be reduced to a degree impossible in other years—impossible now elsewhere—*Carson, Pirie Scott & Co., Chicago, Ill.*

As certain as school opens, just as certain must supplies be bought to meet that event. The only question to be considered now is where can the biggest values for the least money be obtained. "Where there's smoke, there's life," and the store to which most people go for their supplies is the one for all to patronize.—*Hahne & Co., Newark, New Jersey.*

High-Grade Modern Jewelry Store Fixtures and Show Cases

One of the Many Jewelry Stores Designed and Furnished by us

Manufacturing To Order Our Specialty

State your wants

Estimates cheerfully furnished

ALEXANDER H. REVELL & CO., Manufacturers

Rees, Dayton, Eastman Sts. and Hawthorne Ave., CHICAGO, ILL.

If You Would Save

Time and money on your diamonds, send to the people who do business quick. This talk is more especially to the Western and Southwestern Jewelers who are within a trade radius of Kansas City. We are well aware that there are "others" in the diamond business, but we know how to buy for the Western trade, the kind of treatment they want; besides, we have the goods and you make no mistake when you order from us. Try us on your next memorandum order.

The Meyer Jewelry Company

Manufacturing Jewelers

Kansas City, Mo.

Drummer's Story of His Own Generosity

"I AM the most generous individual that ever sold a bill of goods," modestly declared a drummer in the lobby of a local hotel this week.

"Nothing like having a good opinion of yourself," suggested one of the party. "Where did you get the reputation?"

"It's a long story," said the drummer, settling back in his chair, "and the scene, as usual with us traveling men, was in a Pullman car. I was looking out the window, lost in a sort of day dream, when a little tot about two years old left his mother across the aisle and jumped up on the seat beside me. Well, you know me with the kids. I cut out the dreaming and took the youngster on my lap.

"I jollied him with fairy stories for a few moments, until he suddenly spied my watch fob, and reaching down, he hauled out my timepiece. Now, I've got a dandy watch, one of the $400 kind that sounds fire alarms and rings gongs and chimes and all that; in fact, the house gave it to me when I had been with them twenty-five years, and I wouldn't part with it for anything in the world. But, fortunately, when I was in Memphis, just before starting on this trip, I went broke, and gave that good watch to a friend of mine for safekeeping, while he loaned me a much-needed $100 bill.

"I had to have the time, so I dropped into a cheap jewelry house and bought a dollar watch and a fifty-cent fob. This was what the kid hauled out of my pocket. He looked it over, listened to its tick, and then, babylike, he let it fall out of the window. We were going about fifty miles an hour, and the nearest station was seventy-five miles away, so of course it was all off with the watch. The kid's mother had looked over just in time to see the infant toss the timepiece out to the daisies, and she let out a scream that would have made a Comanche green with envy. She was up alongside in a moment with all sorts of apologies and protestations of grief at this unfortunate act of her boy. I tried to calm her, but she kept on insisting that I name the value of the lost ticker, and she would give me a check in payment.

"Think of that opportunity, boys, to get back a few that I lost in Memphis. But I decided to be honest and just get a little fun out of the situation. I admitted to the terrified lady that the watch had been a gift from my employers, was valued far above $400, and that it could play chimes, sound fire alarms, had a searchlight and a few other accessories, but I insisted that it was 'a small matter,' and that it was all right, and that I would not think of taking any money in payment for the loss.

"She wanted to make it $600, and wrote out a check for that amount, but I actually refused to take the money. I know you boys doubt that, but it is true as gospel. I just swelled up, declared I didn't need the money and looked at the other passengers with a superior air, as if I was in the habit of buying $400 watches every day or so. Before I left the train the lady gave me her card and insisted that I give her mine. I did so, and when I got home there was a check awaiting me for $600. Then it was up to me to confess. I sat down and wrote the dear lady a letter, inclosing her check back to her. In the letter I merely said: 'The watch cost $1 and the fob 50 cents, and I have had more than $1.50 worth of fun out of the incident.'

"I never received a reply to that letter."

A Ticking Egg Fools the Hens

Timothy Varney, who lives three miles east of Le Sueur, Minn., and keeps about 200 hens, has been greatly troubled, says the St. Paul *Pioneer Press*, as have most people who keep hens, by the persistent desire manifested by the fowls to set, in season and out, on eggs, stones, or doorknobs, or anything else that comes handy. But he has got hold of a plan now which he has quietly tried this season with perfect success, and which he warrants will cure the worst Light Brahma cluck that ever vexed the heart of man of all desire to sit, and all in less than three hours.

The cure consists of a cheap watch, with a loud and clear tick to it, enclosed in a case that is white and shaped like an egg. When a hen manifests a desire to set out of season he gently places this bogus egg under her sheltering breast and the egg does the rest. It ticks cheerfully away and soon the hen begins to show signs of uneasiness and stirs the noisy egg around with her bill, thinking, perhaps, that it is already time for it to hatch, and there is a chicken in it wanting to get out. She grows more and more nervous as the noise keeps up and soon jumps off the nest and runs around awhile to cool off, but returns again to her self-imposed duty. It gets worse and worse with her and she wiggles about and cackles, ruffles her feathers and looks wild, until at last, with a frenzied squawk she abandons the nest for good and all. The incubating fever is broken up.

Mr. Varney finds use for half a dozen of these noisy eggs and claims that they pay for their cost over and over during the year, by keeping the hens at the business of laying and not permitting them to waste the golden hours in useless incubating.

The Greatest Gold Field in the World

In an article on "South Africa, After the War," in a recent issue of the *Saturday Evening Post*, W. T. Stead, the well-known London journalist, gives the following interesting account of what he describes as the greatest gold field in the world:

The Witwatersrand gold reef, of which Johannesburg is the center, is one of the most-recently developed gold fields in the world. The rock from which the gold is extracted is a blue-gray stone, in which no trace of gold is visible to the naked eye. If there is anything that glitters it is safe to assume that it is iron pyrites rather than the precious metal. The auriferous ore is a thin seam of pebbly stone, which is patiently followed up and down its devious way across the Rand. Its yield is very uniform and it pays to extract it as long as it yields nine pennyweights to the ton of ore. As the gold-bearing seam descends to a great depth a great capital expenditure is required before the ore can be brought to the surface. It is then sorted, pulverized, treated with quicksilver, and then, by the cyanide process, all the gold but eight or nine per cent. is extracted. This irreducible minimum of waste gold remains in the tailings, the vast white hills of which are the most conspicuous feature of the landscape as it has been "improved" by civilization. After some years it is expected that the influence of the atmosphere will render it possible to extract the last remnant of gold, but at present it has to be left where it is.

There are no nuggets. There are patches richer than others. But the glory of the reef is its uniformity. The yield can be calculated to a nicety. Below Johannesburg and the hills which stretch east and west there are stored, according to the calculations of mining experts, between five thousand and ten thousand millions of dollars' worth of gold. It is at present being extracted at the rate of $70,000,000 per annum. If this rate is doubled the last ton of payable ore will be lifted in 1954. Of course, new reefs may be discovered. This calculation is based upon the reef now in sight, the area of which has been measured and its productivity accurately gaged. It is the treasure of the Nibelungenlied, come to light in the end of the nineteenth century.

The knowledge of the existence of five or ten thousand millions of dollars' worth of gold is not equivalent to its possession. There is more gold in solution in the salt sea than in all the mines of Johannesburg. There is said to be gold in the paving stones of London. There is certainly gold in the Welsh Hills. But the value of auriferous ore depends entirely upon the cost of its extraction.

The Rand would not have been worth working if side by side with the gold there had not been found vast deposits of coal, which can be delivered at the furnace at about $2 a ton. But even cheap coal would not have sufficed to make the Rand a success if the mine owners could not have had at their command a supply of cheap labor. In Australia, where gold mining is a white man's industry, they calculate that ore that does not yield an ounce to the ton is hardly worth mining. In the Rand, with cheap coal and cheap labor they can work ore at a profit when it yields only nine pennyweights to the ton.

White labor on the Rand is very dear. The white men employed in the mines receive from $100 to $150 a month. The Kaffirs are paid from $12 to $17.50 a month.

STAND BY THOSE WHO STAND BY YOU

We are making and **SELLING** carloads of

Finest Silverware

Why? Because quality and prices are right and we don't sell department stores or price-cutters

ROCKFORD SILVER PLATE CO.
Rockford, Ill.

OMEGA MOVEMENTS

ARE FINE TIMEPIECES

All made with Lever Escapements and Double Roller
Pendant Set Fitting American Cases

Made in 6 Different Grades

10 Ligne, 11 Ligne, 0 Size, 12 Size, 16 Size

From 7 Jewels to 21 Jewels, Adjusted to heat and cold, and 5 positions

SOLD ONLY TO LEGITIMATE JEWELERS
PRICES NOT ADVERTISED IN ANY JOURNAL

A TRIAL WILL CONVINCE YOU OF THEIR MERITS *SEND FOR PRICE-LIST*

EDMOND E. ROBERT
3 Maiden Lane, NEW YORK

SELLING AGENTS

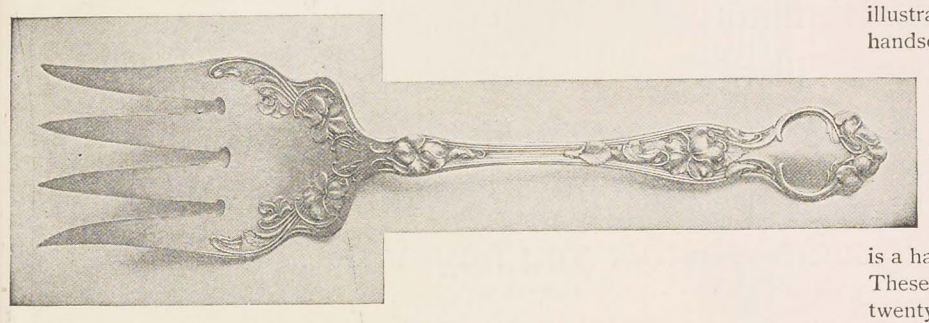
CROSS & BEGUELIN
17 Maiden Lane, NEW YORK

New Goods *and* Inventions

[The illustration and description of new goods and inventions as hereunder is a *permanent* feature of THE KEYSTONE, our twofold object being to keep the *merchant* jeweler thoroughly posted on the very latest and most salable goods, and the *practical* jeweler equally well posted on the newest inventions and improvements in tools and appliances used at the bench. For the benefit of the optician, we also illustrate and describe new optical goods and instruments in this department.]

Interesting Pattern of Tableware

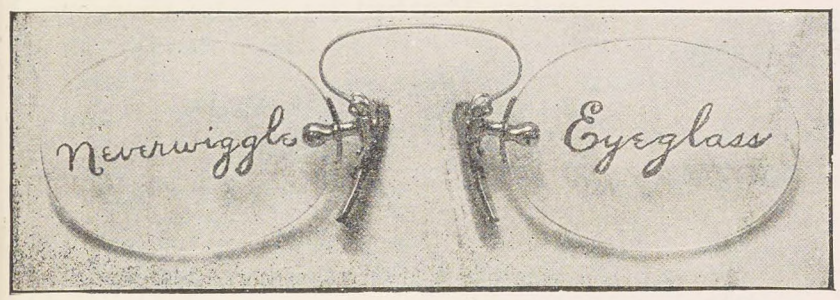
A very unique and artistic floral pattern of sterling silver tableware is shown in this illustration. It is patterned and named after the violet, a specimen of floral life that would seem to be peculiarly adapted to the ornamentation of silver goods. The "Violet" pattern is made by



R. Wallace & Sons Mfg. Co., Wallingford, Conn. The grace and delicacy of the stem and petal are reproduced in this line with artistic truth and close attention to detail. The uniformity with which the different features of the decoration are distributed over the article heightens the artistic effect, and the general character of the execution shows good taste and a high standard of workmanship. The illustration shown is half the size of the original.

Continued Improvement in Eyeglasses

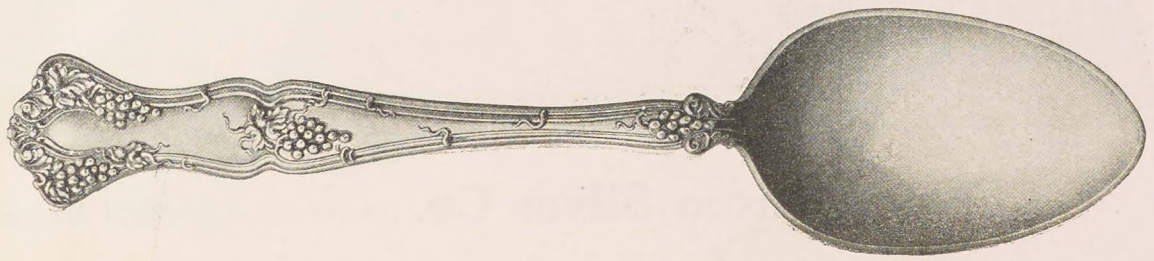
Anything designed to make eyeglasses fit more comfortably and more securely will be welcomed by the optician no less than by all eyeglass wearers. One of the troubles experienced with eyeglasses is that in many cases the continued operation of slipping them on and off the nose causes the screws to loosen little by little, and the glasses lose the firmness of grip.



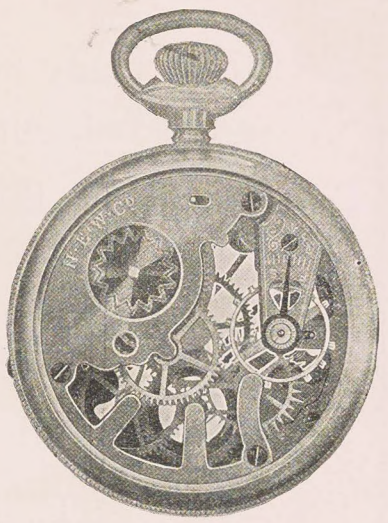
In the "Neverwiggle" eyeglass which is shown in the accompanying illustration, and is manufactured by the Johnston Optical Co., Detroit, Mich., this difficulty has been overcome by means of the new patent "Bridle Studs," which lock the screws so that they are said to be absolutely immovable under all circumstances. Any style of guards may be attached and the Bridle studs will lock them. In the Neverwiggle, too, the guards and springs are easily changed.

New Pattern in Silverware

The accompanying illustration shows a new and interesting style of silverware decoration. The new pattern has been appropriately named the "Vintage," and is made by the Meriden Britannia Co., Meriden, Conn. (International Silver Co., successor). It has been applied to a number of articles for the table, including forks, serving pieces and hollow-handle cutlery. These goods are finished in French gray, with burnished bowls, blades and tines. The conception is an original one, and makes an interesting departure from the strictly floral style. The vine leaf and the clustering grapes lend themselves with facility to the uses of the art craftsman; their ornamental effect is agreeable to the eye and, in this instance, they are given artistic expression in a very skillful manner.

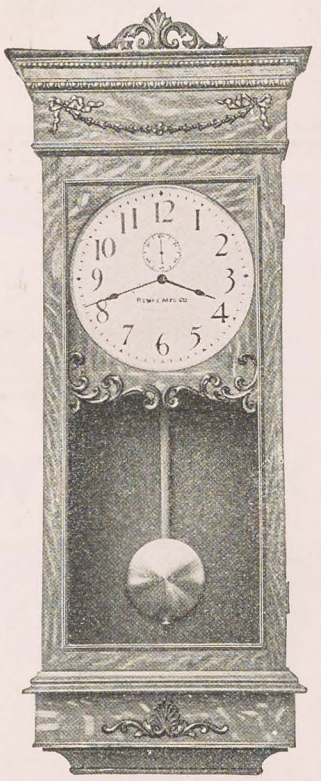


A Skeleton Watch



One of the latest popular attractions in the horological line is a skeleton watch, whose wheels and general operation are immediately visible without necessitating the opening of the case or the unfastening of any part of the timepiece. A line of these ingenious watches is manufactured by the New England Watch Co., Waterbury, Conn., and one of them is shown in the accompanying illustration. The movement is handsomely finished in gilt and "skeletonized" throughout, permitting a full view of the works. The crystals are especially ground to maintain the graceful, thin model form of the watch. It is lighter than the ordinary 18 size watch and is a handsome, interesting pocket timepiece and a guaranteed timekeeper. These watches are made with nickel silver, sterling silver and ten-karat twenty year cases. Most people are familiar with the popular picture, "Watching the Weels Go Round," showing a little girl observing the working of the wheels of a hall clock. Adult watch buyers are but children of a larger growth, and equally fascinated by the complicated motions of watch or clock wheels. The visible works will be an interesting curiosity.

A Clock that Runs Without Winding



Among the new inventions of interest to the jewelry trade is the Rempe clock, which "runs without winding." This clock, which is illustrated herewith, is manufactured and put on the market by the Rempe Manufacturing Co., Danville, Pa. It is self-winding, embodying new features. It has but three wheels, two springs and two levers, all ingeniously arranged. The weak point in all self-winding clocks has been the contact point. In the Rempe clock the makers state that the contact is a forced one with a slide motion, and no matter how much dirt or dust gets on the contact it is cleaned off every time the clock winds. The simplicity of the action is such that it obviates considerably disorder and irregularity in the working. Another important point is the way the power is applied to the train; this consists of a pair of curved levers of cycloidal form which roll against each other without friction and utilize all the power in the batteries. On tests made they show that there is enough power to run these clocks from six to eight years, but as batteries deteriorate with age the life probably will not be more than two years, when a new pair of batteries will be required. As the trade have the assurance that no knowledge of electricity is necessary for the repair of these clocks, all hesitancy in handling them has been removed. Such repairs as may in time be required are easily accomplished by any watchmaker, the simplicity of the mechanism greatly facilitating same.

(*Continued on page* 1643)

OUR FALL STOCK

is now ready for inspection. In anticipating the wants of the retail trade for this fall, our purchases have been larger than ever before, and we are prepared to prove our claims that we have made extraordinary preparations to take care of the retail jewelers' wants this season. We are particularly strong in Elgin, Waltham, Hamilton and New England Watches, and the standard makes of Gold and Filled Cases. Our lines of Pairpoint Silverware, Mt. Washington Cut Glass and a general line of Jewelry, are also most attractive. When you come to the Chicago market we invite you to call—we will make you welcome whether you buy or not.

STEIN & ELLBOGEN COMPANY

WHOLESALE JEWELERS AND DIAMOND CUTTERS

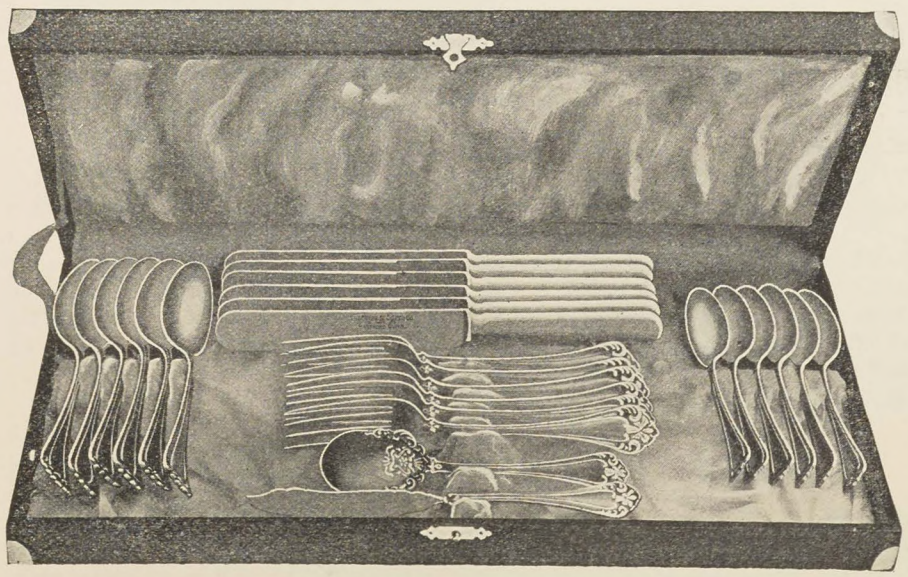
Columbus Memorial Building, CHICAGO

One dozen Pearl Holders, assorted sizes, put up on elegant trays, is a leading feature in our business

F. T. PEARCE & CO. Makers of **Gold Pens, Holders, Pencils, Toothpicks, Cigar Piercers, Fountain and Stylographic Pens**

HEAD OFFICE AND WORKS, 85 SPRAGUE STREET, PROVIDENCE, R. I.
NEW YORK OFFICE, 3 MAIDEN LANE

OUR NEW OFFERING—"The Hartford Combination Set"



A practical combination set of tableware, consisting of 6 Medium Knives ; 6 Medium Forks ; 6 Dessert Spoons ; 6 Teaspoons ; 1 Butter Knife, and 1 gold-lined Sugar Shell. The knives are made of the best crucible steel, plated 14 dwts. silver to the dozen, hand burnished. The spoons and forks are made from fine 18 per cent. nickel-silver, are heavy weight, with just enough ornamentation to take away the plain effect. They are heavily plated, and sectional plated at exposed parts. The style and finish of these cannot be surpassed and our certificate warrant for 25 years is in each case. The case is made of wood, beautifully trimmed with silver mountings and white satin linings. These cases make an elegant display and sell about as fast as you can do them up. We will send one case to any responsible dealer for $6.00, 5 per cent. off for cash, and if they are not found as represented, ship them back at our expense, and your money will be refunded.

The Melrose Silver Co. (Inc.), 255-259 High Street, Hartford, Conn.

New Goods *and* Inventions

(*Continued from page* 1641)

New Pattern of Silver Toilet Ware

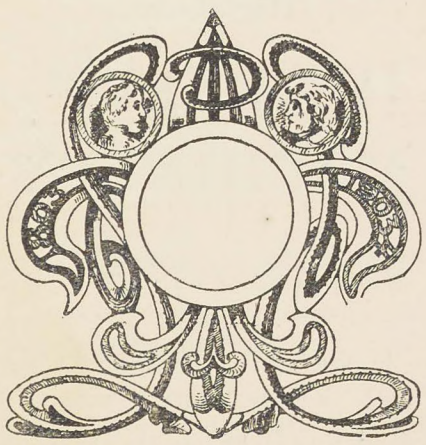
Judging by the increasing number of new designs in silverware that are being produced it would appear that the possibilities for variety in this particular sphere of craftsmanship are inexhaustible. In the illustration

herewith is shown one of the articles comprised in new and original toilet sets made by the Bristol Manufacturing Co., Attleboro, Mass. The floral pattern of these goods is rich and elaborate, and the manner of execution skillful; the structural detail of the blossom with its curling leaves being reproduced with artistic fidelity. No line of goods has reached a higher degree of popularity than silver toilet ware, and this popularity is largely attributable to the beautiful toilet articles now on the market. The fall lines are greatly enriched by the new sets above referred to.

A Unique Scarf Pin

In the accompanying illustration is shown a scarf pin, which is one of an ingenious and salable line of scarf pins and brooches of the variety known as perpetual tremblers. These interesting novelties may be had from any jobber and a catalogue can be had by addressing Perpetual Trembler, Elmwood Station, Providence, R. I. They are made in a diversity of designs, all original in character and calculated to appeal to every form of taste. The continual movement or tremble which they are made to maintain is their most unique feature and should make them popular with all lovers of novelty.

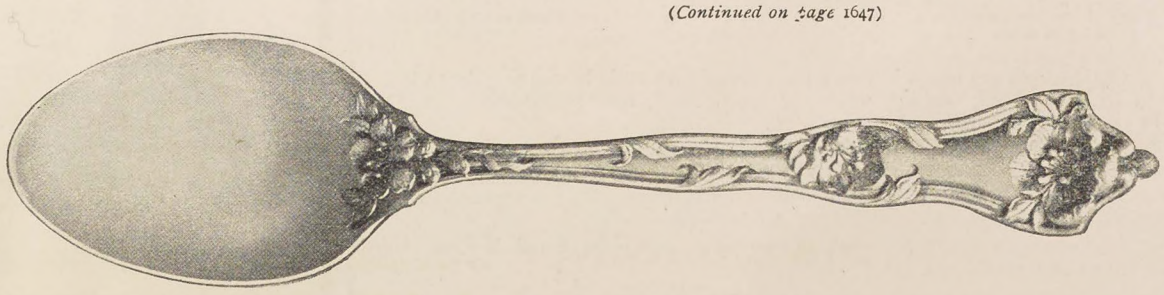
Clock Souvenir of the Exposition



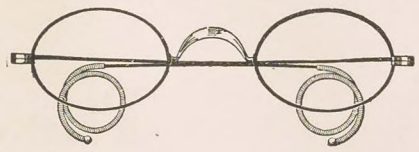
Our illustration shows the design of the new Louisiana Purchase Exposition souvenir clock frame, made by the Anchor Silver Plate Co., St. Paul, Minn A patent was recently granted the company on this design. It represents the flower of France, the fleur-de-lis, and shows the portraits of Napoleon and Jefferson, with the dates 1803–1904. The design is very appropriate. being in the character of a monogram composed of the letters L P E—Louisiana Purchase Exposition. It can also be used as a picture frame.

New Pattern of Sterling Flatware

The accompanying illustration shows a new pattern and an original style of decoration in sterling silver flatware. This pattern is named the "Intaglio" and is made by Reed & Barton, Taunton, Mass. The artistic effect in this design is very striking and shows perfect die work. The detail of the flower is brought out with great salience and artistic truth, and the embellishment is spread over the article with pleasing uniformity. An entirely unique and original process has been employed in reproducing this pretty flower and the result is a triumph of decorative skill. The "Intaglio" pattern embraces a great variety of fancy pieces appropriate for the fall and holiday seasons.



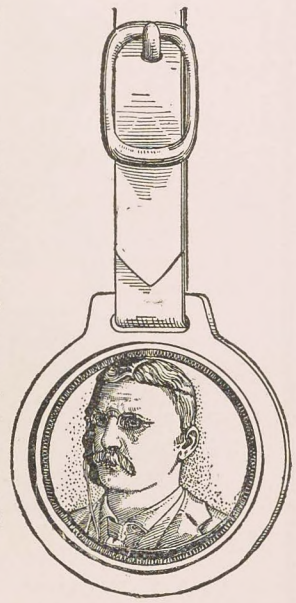
An Improvement in Spectacle Frames



The bulk of the inventive talent of the time is devoted to such devices as will add to the personal comfort of the individual, a fact well exemplified in the numerous improvements in spectacle and eyeglass frames. One opportunity for improvement was furnished by the ear pieces in spectacle frames, and our illustration shows the coil tip attachment of The Spencer Optical Co., New York, a device for doing away with discomfort from the spectacle frame on the sensitive integrement around the ear.

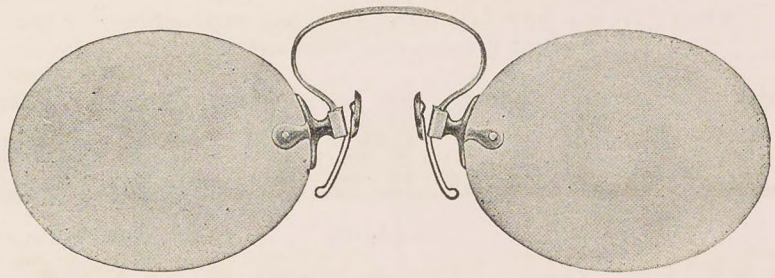
New Campaign Fobs

While the great political battle is on, campaign novelties will no doubt find a ready sale and are therefore profitable goods to handle. Among those that should prove popular with adherents of either of the great parties are the Roosevelt and Parker fobs, one of which is shown in the accompanying illustration. The International Jewelry Co., 14 Maiden Lane, New York, makes these fobs in silverplated, with black and buff leathers and with black ribbon, and in sterling silver, oxidized, with black ribbon and black and buff leathers. There is a timely interest to these goods which should make an effective appeal to popular sympathies or party loyalty, if the tide of election enthusiasm be taken at the flood.

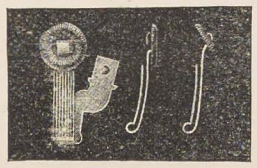


New Eyeglass Guard

In the illustration herewith is shown one of the latest improvements in eyeglasses. This is entitled the Merry U. S. Grip, and is made by the Merry Optical Company, Kansas City, Mo. This grip is practically self-

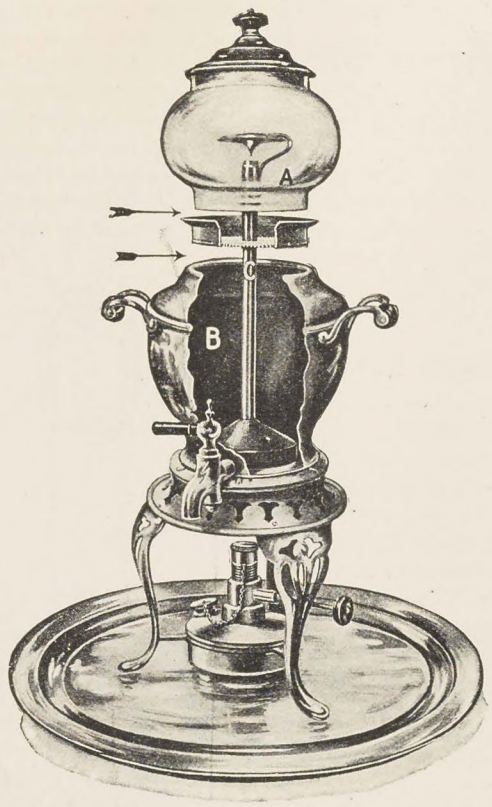


adjusting. The base of the guards should always be given plenty of freedom, however, as they act simply as a support for the glasses, the hold or grip of the guard being dependent almost entirely upon the adjustable pad at the top. The constructive arrangement allows the pad to move back and forth with any unusual movement of the flesh, and therefore does not slip or "wiggle" off. The grooving of the metal or face of the guard gives a gradual and flexible spring effect, which is an important advantage. The screw lock shoulder is an effective device for preventing the loosening of the guard or stud screw that has become a conceded necessity in eyeglasses. The offset angle is readily changed or bent to any desired position without mutilating or destroying the appearance and finish of the guard. This device is symmetrical in design and neat in its appearance.



(*Continued on page* 1647)

"If it burns alcohol, we make it"



Do you know the reasons why

The Sternau Coffee Machine

is superior to any Coffee Machine on the market?

BECAUSE

It is constructed from a sanitary standpoint.

It is impossible to thoroughly cleanse the inside of *other* machines.

The Sternau Machine is the *only one* that does not have a narrow neck.

In the Sternau Machine the sieve is not fixed to the globe, but is a separate part.

The glass globes are interchangeable and will fit *any* Sternau Machine —a good point in case of breakage.

The handles are made of ebonized wood—you can't burn your fingers.

The Sternau Machine is fitted with the "Sterno-Inferno" Lamp, the only perfect alcohol lamp.

The machine locks to the stand, avoiding possibility of upsetting.

It is automatic in action.

Our booklet "K" tells you all about it. We shall be glad to send it with our Complete Catalogue "No. 16" of Chafing Dishes, Tea Kettles, Trays, etc., on request.

S. STERNAU & CO.

204 Church Street, cor. Thomas, NEW YORK

Factory—195 Plymouth Street, Brooklyn, N. Y

When making your fall purchases, ask your jobber for the best known and most artistic

LOCKETS

made by

WIGHTMAN & HOUGH CO.

Providence, R. I.

Fifty Years Established

7524
Fairy of the Stars, green and rose finish

None genuine without trade-mark stamped inside

7517
Chestnut color head, white face

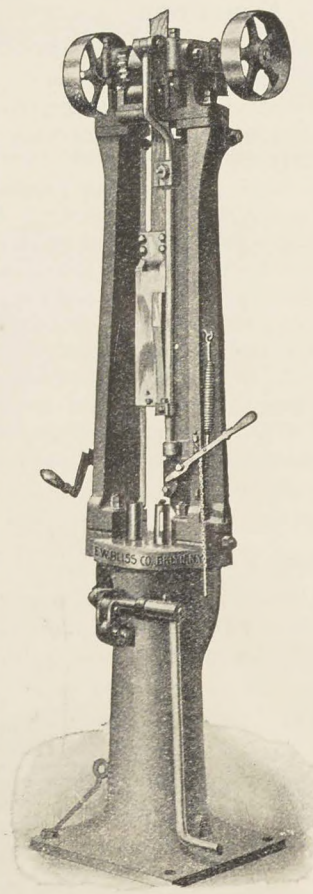
Our lockets are made in every size, shape and style in vogue. In 14 karat and 10 karat gold, sterling silver, ¼ gold shell, fine rolled-plate, qualities always guaranteed to be as represented.

BEWARE of **GOLD** and **FILLED** lockets, that do not bear the maker's mark.

The ¼ gold shell lockets are particularly desirable, for monograms, as they can be engraved without cutting through the gold.

Our new fancy Art Nouveau, green and rose gold finish lockets, both for ladies and gents., are great sellers.

SEND FOR NEW ILLUSTRATED BOOKLET



High-Grade

JEWELERS' MACHINERY

This drop hammer is specially designed for very accurate Stamping and Shaping of fine and delicate work, such as Watch and Clock parts, Hands, Crowns, Pendants, Rings, etc. Write us for prices and further information.

E. W. BLISS CO.

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BROOKLYN, N. Y., U.S.A.

European Office

Clichy près Paris, France

Distributing Agents for Chicago and Vicinity: Stiles-Morse Co., 65 W. Washington St., Chicago, Ill.

Detroit, Mich., Letter

We are now beginning to feel the impulse of renewed activity in all branches of the jewelry trade. The past month has shown a decided gain all along the line. Stocks are filling up rapidly, and extra efforts are being made among the jobbers to prepare for the rush which is soon to come. Manufacturers until now have been feeling sanguine that they could take care of their trade nicely this fall in the way of filling orders, but the unusually heavy demand made upon them lately has caused the impression to prevail that some difficulty will be found in supplying the "late comers" properly. The general opinion now is that there will be a heavy fall trade, fully as large as preceding years. Many new and attractive things are seen in the display windows. A general feeling of satisfaction prevails.

W. F. King of Adrian, Mich., the pioneer jeweler of the State, recently made a trip to Windsor, Ont., to see and hear the original Black Watch Band, of Scotland, which is touring Canada. Mr. King states that he, when a boy of fifteen, followed this same band in his native town in Scotland many years ago. Mr. King recently celebrated his seventy-second birthday by paying his respects to the trade in Detroit. He was seen at Belle Isle on that day chasing the elusive squirrel with as much agility as a young person.

M. A. Deline, who purchased the stock and good will of G. W. Gates, of Morenci, Mich., has added materially to his already comprehensive stock. Mr. Deline was in this market recently purchasing for the fall trade. He feels now that he has one of the best stocks in Southern Michigan.

J. G. Berry, of Vanderbilt, Mich., spent the summer in Detroit. Mr. Berry feels that he has carried the responsibilities of his business about long enough, and therefore has practically turned the business over to his son.

E. D. Grandmanson, of Kenton, Ohio, was a recent visitor in this market making numerous purchases for the fall trade.

Noack & Gorenflo have just completed their annual catalogue. This edition covers 296 pages and comprises a general line of everything needed by the watchmakers and jewelers. The book is neatly bound with a durable gray colored cover. It will pay you to write for a copy should you not receive one within a short time.

J. B. Gibbons and wife, of Charlotte, Mich., spent a few days here recently making selections for fall and holiday trade. Mr. Gibbons has just recently moved into new quarters, and with new fixtures and additional stock his place is made a very attractive one.

Burr, Patterson & Co., manufacturing jewelers, of this city, have just issued a neat and attractive booklet containing original designs in gold and silver novelties. The book will be mailed to their customers among the college fraternities throughout the States. This firm makes a specialty of society emblems as well.

Menne L. Landis was married September 13th to Miss Edna Marguerite Steinman, of Attercliffe, Ont. Mr. and Mrs. Landis will reside in Detroit, where Mr. Landis conducts a school of engraving. THE KEYSTONE extends congratulations.

L. M. Bennett, of Traverse City, Mich., has just moved into his new store. New fixtures and stock add materially to the general up-to-date appearance of his attractive store. Mr. Bennett is an old traveling jewelry salesman, having represented several large jobbing houses for many years.

V. C. Morse and wife, of Ithaca, Mich., left for an extended trip through the South recently.

H. J. Zimmerman, of Milan, Mich., was in town last month making numerous purchases.

E. J. Potts, of Carleton, Mich., has moved into his new store and added new stock.

C. P. Phillips, of Bowling Green, Ohio, made a flying trip to this market recently to replenish his stock for fall trade.

Recent buyers in this market not mentioned in the above items were: A. Geiger, Bay City, Mich.; G. B. Peck, North Branch, Mich.; W. J. Bottomley, Brown City, Mich.; L. Roy Fuller, Yale, Mich.; Sherk & Son, Mayville, Mich.; E. A. Cress, Minden City, Mich.; E. A. Prange, Grand Rapids, Mich.; A. L. Gregory, Lapeer, Mich.; M. F. Farrington, Saranac, Mich.; C. S. Graves, Bad Axe, Mich.; A.V. Loomis, Lapeer, Mich.; W. M. Dewitt, St. Johns, Mich.; A. S. Putnam & Co., Manistique, Mich.; M. D. Walton, Armada, Mich.; D. C. Rogers, Flushing, Mich.; A. L. Bonewell, Gibsonburg, Ohio; F. N. Pauli, Pontiac, Mich.

Cleveland and Northern Ohio

Trade conditions improved considerably last month, although the volume of business was scarcely equal to that for the same period last year. There is much improvement in the situation in the steel industry, the placing of orders by railroad companies proving very beneficial. There is no excitement or alarm in this section over the presidential campaign, and the people are buckling down to fall business with unshaken confidence. The prospects for winter trade are brightening daily.

L. M. Sigler is, at this writing, visiting New York and other Eastern points. He is accompanied by his family and is combining business with pleasure.

H. W. Burdick is again attending to business after a painful illness of two weeks.

S. J. Ball, son of Webb C. Ball, of the Webb C. Ball Watch Co., has just returned from an extended trip through the wilds of Canada. Mr. Ball had a delightful time, and had sport aplenty with rod and gun.

A. T. Hubbard, of the Cowell & Hubbard Co., has been East for a few weeks buying the latest in novelties. Mr. and Mrs. Hubbard recently celebrated their twentieth wedding anniversary, and received on the occasion a handsome Sevres vase as a token of esteem from the employees of the firm.

Will. Wagner, the well-known traveler for the Sigler Bros. Co., has just recovered from an operation for a deep abscess. The operation was entirely successful and Mr. Wagner was enabled to resume his duties.

H. S. Hurlbut, traveler for the Scribner & Loehr Co., is again out after an operation for mastoiditis. Mr. Hurburt was in the hospital for a month, as the operation for this ailment is extremely painful and dangerous.

A new firm will occupy the room vacated by the C. C. Sigler Co. C. P. Coyne and John L. Murray will engage in the jewelry business soon in that location. Mr. Coyne has been in the furniture business on Ontario Street for a number of years, and Mr. Murray is a practical jeweler who was with the Siglar Co. for some time.

Frank L. Sumner has again embarked in the jewelry business, having become connected with Fred. Lewis, of the Lewis Jewelry Co. A branch store will be run at 14 Colonial Arcade, with Mr. Sumner as manager.

Camillio Taussig, who sold his shop in the Clarence Building about three months ago and went to the coast, has been in town lately. Mr. Taussig was buying machinery and tools with which to start a factory in Los Angeles, whither he has removed.

H. C. Brooks, hitherto engraver for Bowler & Burdick Co., has resigned and has entered the employ of the Gorham Mfg. Co., at its New York establishment.

Judd Dye, hitherto of Galion, Ohio, has moved to this city and become assistant to Mr. Dietz in the material department of the Bowler & Burdick Co.

C. F. Einig, the well-known watch expert, will spend a few days at the world's fair, and no doubt will be much interested in the various watch exhibits.

Chas. J. Roseberry, the Detroit Street jeweler, will open a branch store on the South Side on Denison Avenue.

W. J. Eroe and wife, of New Castle, Pa., were in town last month on a visit of pleasure.

Chas. Groth, secretary and treasurer of Bowler & Burdick Co., is attending the fair, and will visit his old home in Kansas.

Wm. Valhowe has resigned his position as clockmaker with the Cowell & Hubbard Co., and will locate in Omaha, Nebr.

Chas. E. Burris, Galion, Ohio, who was married recently, has sold out his business and, it is reported, will locate in Lorain, Ohio.

L. W. Wyckoff, of Chagrin Falls, Ohio, has gone on a trip to the Western States to investigate a mining proposition in the Black Hills.

A. E. Kintner, Painesville, Ohio, recently presented a fine clock to the Lake County Trade and Labor Union.

B. F. Kerr has discontinued his business at Ashtabula, Ohio, and is now looking for a new field.

Chas. Bargman, Toledo, Ohio, has moved from 505 Summit Street to 442 St. Clair Street.

The following out-of-town jewelers were in the city during the past month: E. J. G. Lovett, Willoughby, Ohio; Albert Zang, Alliance, Ohio; A. J. Heiman, Barberton, Ohio; C. J. Duncan, Massillion, Ohio; John Ewing, Kent, Ohio; T. H. Adamson, Cochranton, Pa.; Geo. F. High, Medina, Ohio; L. G. Goddard, Ravenna, Ohio; D. Leonheiser, Huron, Ohio; J. C. Joss, New Philadelphia, Ohio.

Opalized Shark in New South Wales

Since they were first discovered the famous opal fields at White Cliffs, New South Wales, have yielded many curious fossils, particularly those of prehistoric marine life, says *Chambers' Journal.* But the latest discovery is a most extraordinary one, and will prove of the deepest interest to the scientific world. It is that of a fossilized, or rather opalized, member of the shark family, which was found on Block No. 9, at a depth of 35 feet from the surface. The Sydney press states that the specimen measures 3 feet 6 inches from the snout to the tip of the tail. The body is in seven sections, the circumference of the largest of which (the head and shoulder portion) is 18 inches; each section is 6 inches in length.

The deeply indented eye sockets show very plainly, "and thin veins of purple opal encircle the fish from tip to tip." At the mouth these veins make an oblong and clearly defined course, though the continuity is occasionally broken. No particulars as to weight are given, but as the fossil has been sent to London, these and other matters of interest will soon be determined.

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MANUFACTURING
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RETAIL
TRADE

SEND
YOUR ORDERS
• TO OUR •
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DORST & Co. KANSAS, CITY-MO.
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FOR SPECIAL ORDER WORK- ALL KINDS OF REPAIRING
DIAMOND MOUNTINGS - MEDALS · CLASS PINS *etc*,

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OUR FACILITIES GUARANTEE THE BEST OF WORK
— AT-REASONABLE-PRICES —

COME TO THE ST. LOUIS WORLD'S FAIR

And when you do come, make your headquarters at our office, where you can receive your mail and attend to your correspondence. You are welcome here, and we will do all in our power to make your visit a pleasant one.

Wm. Weidlich & Bro.

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ELECTRO-PLATING SALTS.

THESE ELECTRO-PLATING SALTS ARE PREPARATIONS IN DRY FORM, CONTAINING METAL AND CHEMICALS IN ACCURATE PROPORTION, PRODUCING AT ALL TIMES CORRECT SHADES. DISSOLVED IN WATER THE BATH IS AT ONCE READY FOR USE. WORKED WITH EITHER DYNAMO OR BATTERY, SAME AS OTHER SOLUTIONS.

SOME OF THE SALTS: Rose Gold, Green Gold, Parisian, Roman, 14 or 18 K., Red, Guinea, Old English Guinea Green, Guinea Rose, Gold Dip, Silver Salts, French Gray Dip, Silver Ebonizer, Oxides, Etc.

OUR ELECTRO-PLATING SALTS FOR **Dark Green Gold** (Antique Green) AND **Orange Rose Gold** (Orange Yellow)

are the leading shades now extensively used for single and double coloring. Directions for doing this kind of work with order. Our Electro-Plating Salts are universally used. Write for circular.

U. S. ELECTRO-CHEMICAL CO., H. Hirschbach, Prop., 80 Elm St.- NEW YORK

E. Fliassof Bros. & Co.

IMPORTERS AND JOBBERS OF

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100 State St.
ALBANY, N.Y.

A LARGE ASSORTMENT OF DIAMOND-MOUNTED JEWELRY CARRIED IN STOCK

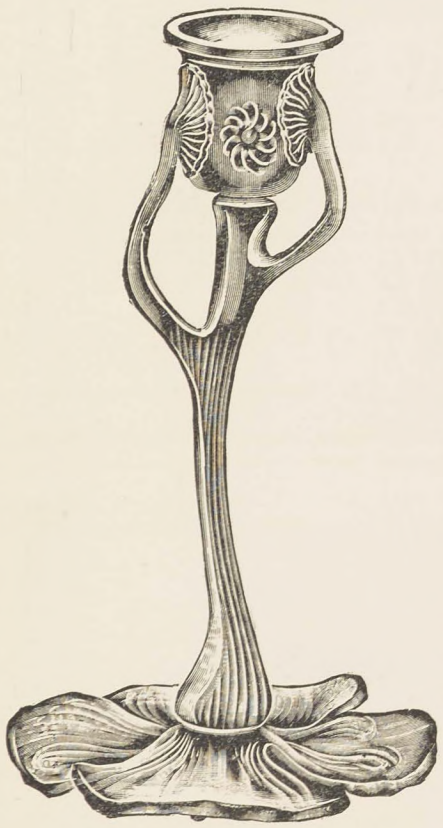
New Goods *and* Inventions

(*Continued from page* 1643)

Automatic Toric Lens-Grinding Machine

The growing popularity of toric lenses is responsible for a new automatic toric lens-grinding machine of wonderful simplicity and efficiency. This machine is manufactured under letters patent No. 766,482, granted on August 2d of this year, the manufacturers being Pinkham & Smith, of Boston, Mass., and the inventor Walter J. Wolfe, formerly with Ross, Ltd., London, and now with the Boston firm. The machine is entirely automatic in its working, a mere boy being able to run a half dozen of them, while the makers claim that the work done is equal to that of the most skilled workman. The machine will grind any kind of toric lenses or cylindrical lenses and any form of toric curve, plus or minus.

Quaint Hollowware Novelties



Hollowware has its wealth of new designs as well as flatware. A daintily-designed article in this line is the candlestick shown in our illustration. There is a graceful *art nouveau* effect, and a departure from the conventional that is very pleasing. This is one of many attractive novelties in hollowware made by the M. S. Benedict Manufacturing Co., of East Syracuse, N. Y. The candlestick is seven inches high, and the revival of the quaint that is now the vogue makes it a timely article to handle.

New System of Time Distribution

In this hurricane age, when time is, indeed, money, and when correct time is a universal essential, the new Thrasher time system is especially opportune and interesting. In the big modern hotel and office buildings part of the equipment will be a system giving correct time in each room. The Thrasher system, devised by the Thrasher Time System, New Haven, Conn., is admirably adapted for this purpose, a master hall clock regulating with absolute accuracy the time of all the secondary clocks that constitute the system. The system is not self-winding in the accepted sense, for there is no winding. It is rather self-impelled, the time-indicating mechanism being automatically actuated by a simple electrical device. There is no time-train, a simple ratchet operating the device with accuracy.

Another New Floral Pattern

So many and so excellent have been the achievements in floral pattern designing that it would be invidious to make comparisons. Yet another triumph in this line is shown in our illustration. This new pattern is named the "Nenuphar," the botanical name of the flower used in its decoration, the great white water lily of Europe. This pattern is one of the many new ideas in flatware designs admirably worked out by the American Silver Co., Bristol, Conn. The detail of the beautiful flower is reproduced with great skill. The die work is perfect in detail, showing all the characteristics of the water lily, with its drooping blossom and gracefully-flowing blade. The general contour of the decoration is symmetrical and pleasing in appearance.

A Gold-Mining Dredge

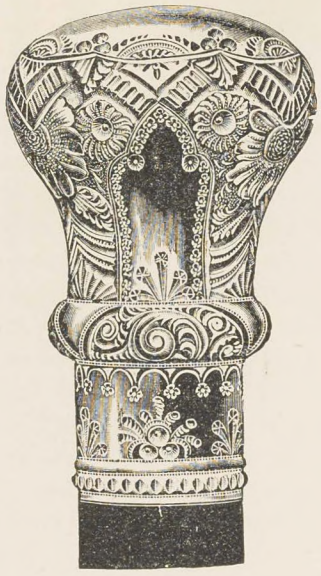
The newest machine for gold mining, says the *Book Lovers' Magazine*, is practically a gigantic dredging machine. A great steel ladder extends in front of the vessel, like an inverted bowsprit. Up and down the ladder march in endless procession bucket-shaped plows, with mouths of manganese steel. The chain that carries them will support a weight of five hundred tons. These keen-edged scoops will cut through solid rock. A marine engine drives them with irresistible force. They delve into the banks ahead of the ship, literally eating up the land. Gorged with rock and sand, the buckets mount the ladder again, and along a huge gantry are carried back to a rotary cylindrical screen, into which they discharge their contents at the rate of thirteen buckets a minute. Each one of these steel carriers contains five cubic feet of earth, so that an amount of material equal to the contents of three city dump carts is poured every minute of the day and night into the whirling cylinder.

Other machinery separates the gold automatically. The total expense in a day in the operation of one of the great gold-mining vessels is something less than thirty dollars. The ships cost from fifty thousand to ninety-five thousand dollars, according to size. The first year's cruise will pay for the monster itself, will pay the cost of the land, even at five thousand dollars the acre, will meet all expenses, including repairs and depreciation of machinery, and still net the owner over one hundred thousand dollars. These are figures of actual operations, and regarding land carrying a low proportion of gold. It is little wonder that the men who own these mining fleets do not advertise. Many of them are reaping a profit of more than six hundred per cent. on their investment. The industry is, of course, legitimate in every sense, but it has all get-rich-quick schemes absolutely eclipsed.

One of the gold-ships will devour an acre of earth every month. As there are now one hundred vessels in the unique Pacific Coast fleet, one hundred agricultural acres are being permanently destroyed every thirty days. In the valleys thus far prospected and purchased by the operators there is an assurance of at least fifty years of mining activity; so that at the end of that period, even if no additional boats were launched in new sections, 60,000 fertile acres will have been deduced from the tillable areas of Western America.

Of course, no amount of yellow metal can actually offset the annihilation of the fairest valleys husbandry has made to bloom. As these ships tear up alluvial acres at a cost of three and four cents a ton, and can work at a profit land that contains a very small proportion of yellow sands, it means that few valleys whose rivers rise in mountains are safe from invasion. And so the Western States in America have reason to regard with grave seriousness the cruising of those semi-subterranean squadrons, which can gather yellow particles so microscopic that the human eye cannot detect them, and in reaping this precious harvest can so metamorphose fertile dominions into perpetual desolation.

The search for gold by means of floating steel monsters has, indeed, become a genuine yellow peril!



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GOLD HEAD CANES

THE FULL ASSORTMENT SHOWN ON OUR ILLUSTRATED SHEETS. WRITE FOR THEM

THE **THIMBLES** WITH THIS TRADE S MARK ARE "THE **THIMBLES** THAT SELL"

No. 22

No. 50

No. 102

No. 25

No. 141 TAILOR'S

PAT. MAY 31 98.
PRISCILLA.

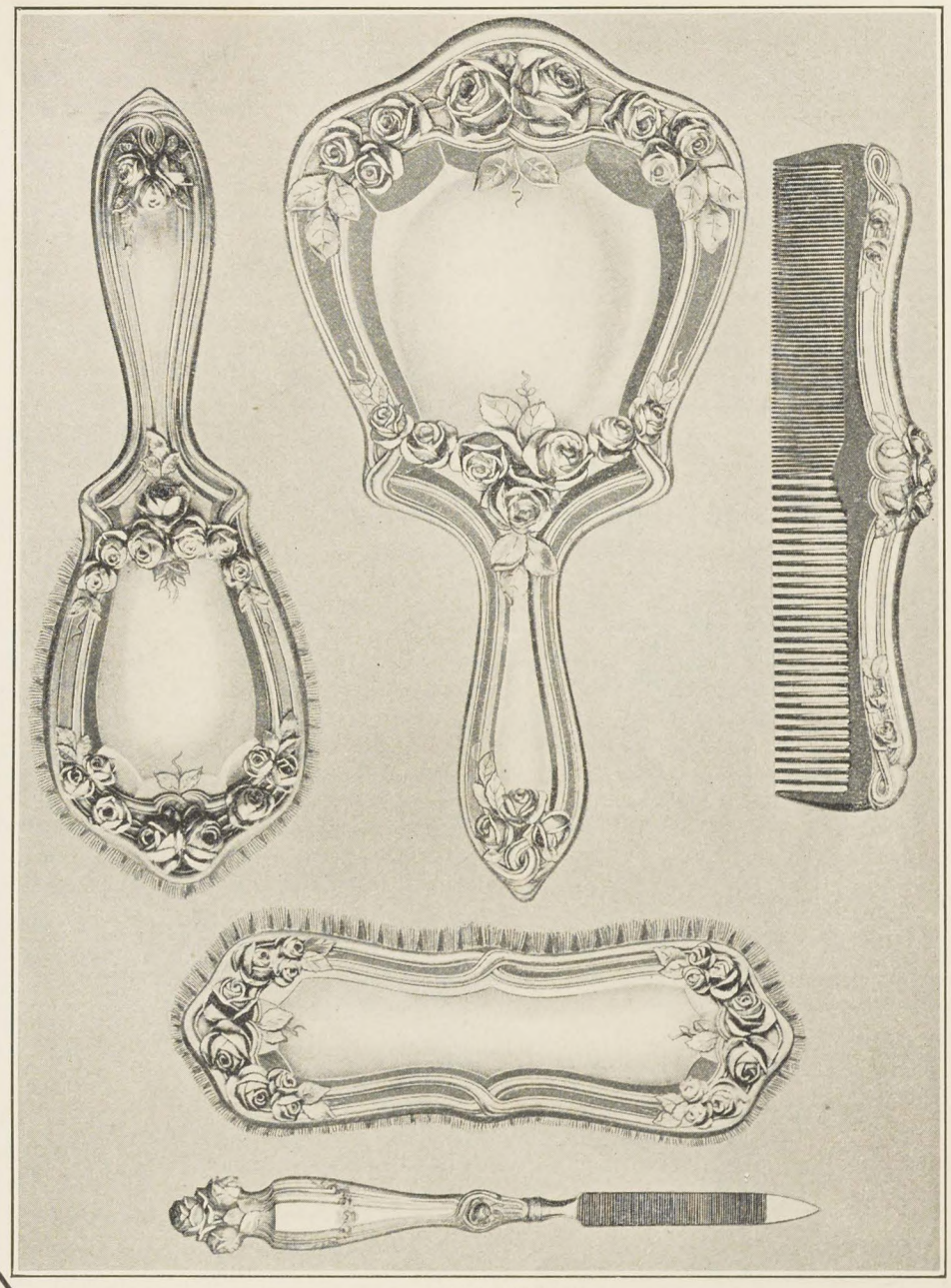
No. 143 GOLD FILLED

No. 28 GOLD BAND

No. 146

YOU'LL BE INTERESTED IN OUR CATALOG OF GOLD AND SILVER THIMBLES—THE THIMBLES THAT SELL. ABOVE ILLUSTRATIONS CONVEY JUST A HINT

No. 1904
THE "ROSE," TOILET SET



1904 ROSE SET

COMPLETE LINE OF TOILET AND MANICURE PIECES
SEND FOR OUR FULL-SIZE ILLUSTRATIONS

At the same time ask for those of our

No. 1900
"VIOLET"
TOILET SET

'TIS A FIT COMPANION SET FOR THE ROSE

Simons, Bro. & Co.

611 Sansom St., PHILADELPHIA

NEW YORK { 170 Broadway / 41 Union Square

CHICAGO { 702 Columbus Building

Philadelphia Letter

Another Trade Campaign

So large has been the increase in the Southern business of the Philadelphia merchants in the last four months, as the result of a vigorous campaign of advertising instituted by the several trade organizations here, that a plan was outlined at a meeting of the board of directors of the Merchants' and Travelers' Association on September 23d for the prosecution of a similar campaign in the Middle and Middle Western States. It is proposed to adopt a similar advertising idea to the one used so successfully in the South. Circulars will be sent to representative business houses in New Jersey, Delaware, Western Pennsylvania and the Middle West, setting forth the advantages Philadelphia merchants have to offer in all lines of trade, and inviting prospective buyers to visit this city and personally inspect the goods. According to Director Collins' plans, arrangements will be made with the various railroads to run special excursions to this city at a one and one-third rate and allow merchants to take advantage of the trip's stop-over privileges here. If these arrangements cannot be made, the leading merchants in the several lines of trade will be asked to allow a rebate on the fare paid to this city by out-of-town customers who transact a certain amount of business here. This plan has already been adopted by more than thirty business men here, who speak highly of it. A committee was appointed to take up the matter of extending the trade canvass to new territories, and Calvin M. Smyth was made chairman.

Alleged Swindling Scheme Frustrated

The arrest of a man named Charles Damon, some weeks ago, frustrated a scheme which otherwise might have developed with serious consequences to Weber & Brother, jewelers and opticians, 2209 N. Front Street. Damon, it is alleged, went to the establishment of Charles L. Wolff, a printer, 857 N. Tenth Street, and ordered 500 blanks printed in the name of Weber & Brothers. Wolff accepted the order, but became suspicious, and communicated with the jewelry firm and learned that no one had been authorized to give such an order. A special policeman and a patrolman were notified, and when Damon appeared to receive the order blanks from Wolff he was arrested. At the subsequent hearing before Magistrate Ternan, Jeweler Weber said that if Damon had succeeded in obtaining the order blanks he could have secured thousands of dollars' worth of goods on the firm's credit. Damon said another man induced him to give the order, but the police did not credit this defence. Magistrate Ternan held Damon in $500 bail for court. He was taken to the City Hall and photographed and looked over by the detectives.

Salesman's Samples Disappear

The disappearance on September 14th of a case containing jewelry valued, it is stated, at $3000, from a porter's pushcart at Ninth and Market Streets, was the subject of rather sensational notice in the daily papers. The jewelry, so the papers stated, consisted of necklaces, brooches, pins and bracelets, and belonged to George H. Calhoun & Co., Providence, R. I., with two other cases of similar jewelry, it was brought to this city on the previous morning by the company's traveling salesman, M. A. Mayer. According to Mayer, he had Macaran, a porter, carry the three cases from Broad Street station to the Bingham House, and from the hotel to a department store. Macaran used a pushcart, and Mayer followed him to the store. The salesman entered the store by a front entrance and went to the seventh floor. Macaran took the pushcart and the three cases of jewelry to a rear entrance to the place. He had carried two of the cases into the store to Mayer, and had gone to the street again to get the third case, when he ran back to the salesman and told him that the case of jewelry and the pushcart had disappeared. Mayer promptly caused the arrest of Macaran. The prisoner was arraigned before Magistrate Kochersperger and held for a further hearing. Almost as mysteriously as they disappeared on Wednesday, however, the case and its contents were recovered on the following day in a doorway on Jayne Street above Seventh. The police attribute the disappearance of the goods to mischievous boys, who wanted to play a trick on the porter who had them in charge. The latter was immediately released upon the recovery of the goods.

Ernest Goldy, of this city, a recent graduate of the Philadelphia College of Horology, has accepted a position in the jewelry store of C. S. Powell, 5 South Eighth Street.

In competition with several retail jewelers, Z. J. Pequignot recently secured the contract for the supply of the souvenirs distributed in connection with the celebration of the twenty-fifth anniversary of the Fidelity Mutual Life Insurance Co., Philadelphia. Mr. Pequignot's design for 100 scarf pins consists of a St. Bernard dog's head, emblematic of the company, and the badge submitted by him is a handsome jeweled one, encrusted with diamonds.

The firm of C. F. Rumpp & Sons, manufacturers of pocketbooks and fancy leather goods, at Sixth and Cherry Streets, was recently incorporated as C. F. Rumpp & Sons Co., an interest in the business being given to the more responsible and valued employees. In their employ at the present time are men who entered the service as boys, and who have been faithfully aiding in maintaining the standard of the firm by excellent and thorough workmanship in every detail of their daily labor. These will find a meet reward in part proprietorship in this successful business.

The following are some of the recent arrivals at the Philadelphia College of Horology: W. Hains, Philadelphia, Pa.; G. Stanley Nicoli, Patchogue, N. Y.; R. Deitz, Hanover, Pa.; C. H. Hartman, Hanover, Pa.; H. Gallbreath, Johnstown, Pa.; John Pahl, West Troy, N. Y.; M. L. Britt, Newton Grove, N. C.; G. G. Hardy, Whitehall, N. Y.; Thos. A. Goslin, Philadelphia; Davis Bellemy, Maunch Chunk, Pa.; L. Lennolt, Oswego, N. Y.; W. Allen, Mt. Holly, N. J.; G. A. Smith, Goldsboro, N. C.; Chris. Kelly, Pottsville, Pa.; G. M. Bunker, W. Va.; C. R. Mays, Reading, Pa.; H. O'Neil, Dubois, Pa.; M. M. Reider, Newton, N. J.; Emil Spese, Philadelphia; Carl Hulbert, Middleburg, N. Y.; J. B. Feeney, Holyoke, Mass.

It Pays to Make Concessions

It does not pay to be "small" in business. Many a merchant has lost a dollar by haggling over half a cent. It pays sometimes to let a customer have his own way, but it never pays to argue about it. When a merchant is asked to make a small discount he should decide at once whether it is advisable to grant the request. If he thinks it best to stick to his price he should decline courteously but firmly to make the reduction, and should avoid a prolonged discussion of the subject. If he decides to allow the discount he should do so in a manner that will not spoil the effect of the concession. He should not try to convey the impression that he is bestowing charity, or act as if he believed his generosity would land him in the poorhouse.

When it is possible, it is undoubtedly best to make the prices right at the start, and then stick to them. Then, if it be found that any line will not sell at the prices fixed, it should be reduced to all alike. But most retail merchants find it extremely difficult to adhere to any hard and fast rules. The laws of the Medes and Persians would not be well adapted to modern merchandising. A refusal to make a small reduction may cause the loss of a profitable customer. The big department stores can afford to have one price and stick to it. In fact, their business could not be conducted on any other principle. But to the average retailer, especially to one doing business in a small town, where he knows every one and where every one knows him, the case is entirely different. Such a merchant is pretty sure to find a rigid adherence to the one-price rule a very expensive luxury.

What has been said here refers chiefly to what might be called compulsory concessions —to compliance with requests or demands for discounts and reductions. This serves a purpose in retaining customers, but it can never be entirely satisfactory to the merchant. It is a method of doing business that requires the exercise of much tact and judgment, and is, to state the fact plainly, a premium on kicking. The customer who gets the discount feels under no obligation, for he knows he would have received none if he had not demanded it. Customers who pay the regular prices without protest are unfairly treated, and, if they learn that others are paying less, have good cause to be dissatisfied. By giving concessions to prevent the loss of customers the merchants may bring about the result he fears.

As Others Hear Us

The last person a man becomes acquainted with is himself. He cannot see himself as others see him, nor can he even hear his own voice with the ears of the rest of the world. In proof of this latter inability, Doctor Laloy, in *La Nature*, describes some of his experiments.

If a person records on a phonograph a few sentences pronounced by himself, together with others by his friends, and causes the machine to reproduce these, it generally happens that he easily recognizes his friends' voices, but not his own. On the other hand, the friends recognize his voice perfectly. This fact proves that every one hears his own voice differently from others.

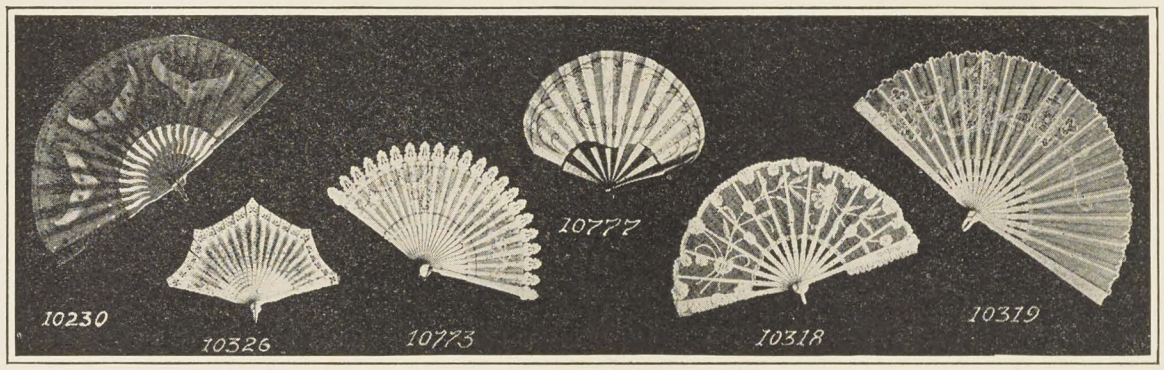
The difference lies in the quality of the tone. One hears his own voice, not only through the air, as do his auditors, but across the solid parts, situated between the organs of speech and those of hearing. The sound thus produced has a different timbre from that conducted to the ear by the air above.

Take the end of a wooden rod between the teeth and pronounce a vowel continuously. Let the other end be alternately taken between the teeth and released by another person who, at the same time, stops his ears.

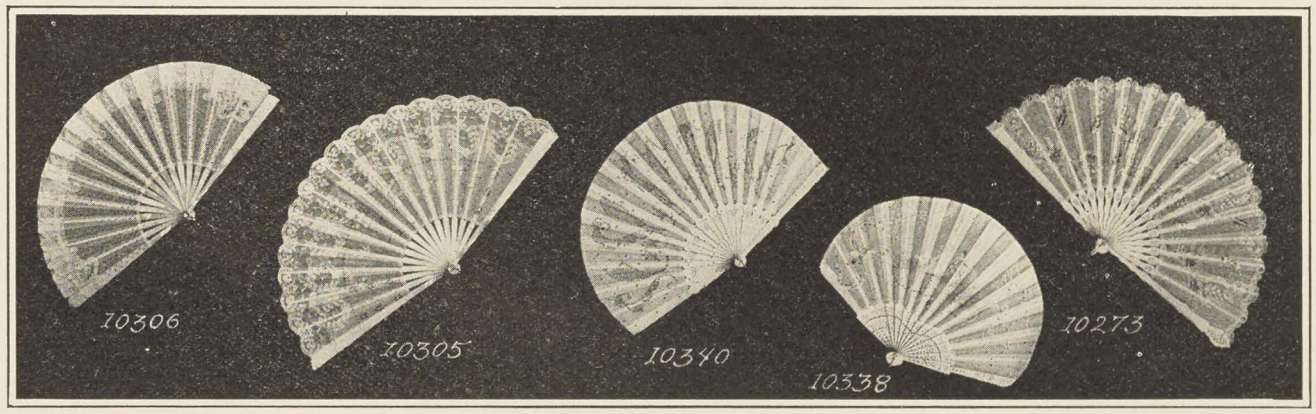
The latter will find that every time he seizes the rod in his teeth the sound is stronger than when it reaches the ear through the air above, and has a different quality. The passage of sound through a solid body augments its intensity and modifies its quality.

HIGH-CLASS FANS

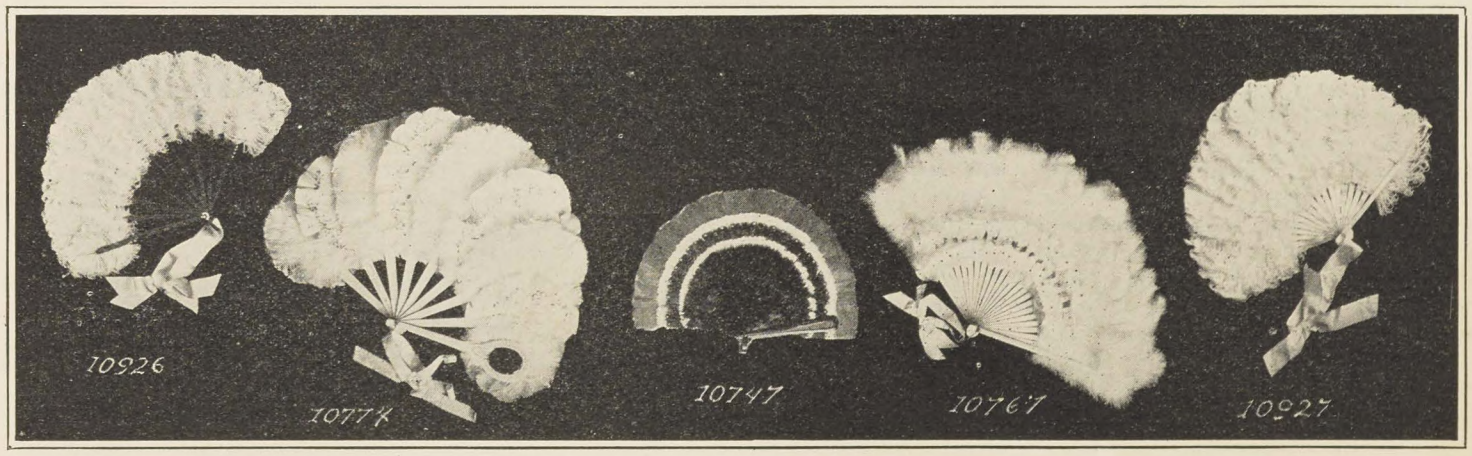
Make suitable **Birthday, Wedding and Christmas Gifts** and are used extensively at dances, parties and the theater. We show a few of our 300 styles that we imported direct.



No. 10230 Carved real ebony sticks; black silk gauze, ettomine insertion and black spangles to match . . . . . **$3.00** each
No. 10326 Cabinet Fan; fine quality silk gauze, heavily steel spangled, with white or black bone sticks . . . . . **6.00** each
No. 10773 Empire Fan; hand painted on fine quality of silk, gilt spangles and gilt carved wood sticks . . . . . **3.00** each
No. 10777 Pompadour Fan; amber colored celluloid sticks, two subjects of hand paintings, steel spangles . . . . . **3.75** each
No. 10318 Empire Fan; all lace applique and lace insertion, carved bone sticks . . . . . **3.00** each
No. 10319 Silk Gauze Fan; handsome embroidered insertion and carved bone sticks . . . . . **3.50** each



No. 10306 Empire Fan; real mother-of-pearl sticks, fine silk, beautifully full steel spangled, real Duchess lace edge . . . . . **$9.00** each
No. 10305 Real white mother-of-pearl sticks, white paintings on fine silk gauze, steel spangled, lace edge . . . . . **7.50** each
No. 10340 Pompadour Fan; carved bone sticks, inlaid with steel spangles, double silk gauze, steel spangled design, iridescent pearl silk effect **6.00** each
No. 10338 Handsomely carved bone sticks, steel inlaid; hand painted in two subjects, steel spangles . . . . . **5.00** each
No. 10273 Carved sticks, beautiful lace insertion and edge on double-faced silk gauze, steel spangled . . . . . **3.75** each



No. 10926 Ostrich Feather Fan; amber colored celluloid sticks; in white only . . . . . **$1.00** each
No. 10774 New White Maribow Feather Fan; mirror in front stick; fancy painting on feathers . . . . . **1.00** each
No. 10747 Peacock Fan in beautiful green feather combination; shell colored celluloid sticks . . . . . **2.25** each
No. 10767 Handsome White Maribow Feather Fan with steel spangles and silver wood inlaid sticks . . . . . **1.25** each
No. 10927 Real white mother-of-pearl sticks, with genuine Ostrich feathers . . . . . **5.00** each

We show a large variety in fans in similar styles at $2.25, $4.50, $6.00, $7.50, $8.50, $10.50, $12.00, $13.50, $15.00, $18.00, $21.00, $24.00, $27.00 and $30.00 a dozen up to $175.00 a dozen

Every up-to-date jeweler should show a line. Never out of style, always in demand

KUNSTADTER BROTHERS,

Manufacturers, Importers and Jobbers of
Jewelry, Novelties, Fans, Hair Ornaments
Leather Goods, etc.

Write for our circulars—always something new

238-240 ADAMS ST., CHICAGO, ILL.

Items of Interset

Swayze Bros., Niagara Falls, Ont., have been appointed official watch inspectors for the Michigan Central Railroad.

W. A. Riley is about to open a jewelry business at Greenwood, S. C., which will be incorporated with a capital of $5000.

Frank H. Reynolds has retired from the position of watchmaker for F. B. Wallen, of Camden, N. J., and gone to New York City to take up another position at the bench.

The Spatula Publishing Co., Sudberry Building, Boston, Mass., has issued a new edition of its cut catalogue, showing a great variety of illustrations suitable for advertising purposes.

E. O. Sisson, formerly connected with Bradley Polytechnic Institute, Peoria, Ill., has just returned from a trip extending over a period of one year in Germany, where he has been studying.

Kirkwood & Co., Scranton, Miss., have purchased the jewelry business hitherto conducted by W. O. Parks, at Moss Point, Miss. The purchasers have placed H. W. Perry in charge of the newly-acquired store.

Frank F. Layre, a jeweler, of Philadelphia, Pa., was recently robbed of a diamond ring by a swindler, who visited the store in the evening for the ostensible purpose of purchasing a diamond ring. Mr. Layre showed the visitor a single ring, and the latter taking the ring in his hand to examine it ran off with it. The jeweler, a policeman and a number of people gave chase, but the thief managed to escape.

The Faneuil Watch Tool Co., Boston, Mass., is receiving much attention from manufacturers who are adopting up-to-date methods and tools. Two gentlemen, of the firm of Baere & Rempel, Biefold, Germany, have lately been investigating the Rivett grinders, and two others from Switzerland have entered orders for these grinders and will use them in their factories. The University of Columbia has also recently placed an order for one of the Rivett precision lathes with several attachments.

Thomas P. Strittmatter, secretary and treasurer of the Quaker City Cut Glass Company, Philadelphia, Pa., whose handsome exhibit in the Varied Industries Building at the St. Louis Exposition attracts crowds of visitors every day, spent the first two weeks of September in St. Louis looking over the exposition and meeting the jewelers who called at their exhibit. Mr. Strittmatter was pleased with the big show and the attention his firm's exhibit was receiving. He thinks their business will largely increase among the Western and Southern trade as a result of their display.

On September 7th was laid the corner stone for the government building which is to be erected on the campus of Bradley Institute. The students of the horological department participated, and Congressman Graff spread the cement which is to hold the stone in place with the solid silver trowel made and presented to him by the horological students. Appropriate speeches were made by O. J. Bailey, president board of directors; Dr. T. C. Burgess, director of the institute; E. O. Sisson, former director, and Representative Graff, of the district. They expect to have the building completed and ready for occupancy about the first of the year.

Victor Nivois, 21 Maiden Lane, New York, is now ready to place on the market his new patented chronograph watch. The feature-in-chief of this unique timepiece is a one-fifth second, start, stop and fly-back attachment operating from the stem. What makes the watch especially interesting to the trade, is its popular price and its usefulness to all classes who use a timepiece of this character—physicians, sportsmen and others.

The M. Winter Lumber Co., Sheboygan, Wis., has issued a voluminous catalogue entitled "Winter's Encyclopedia Americana of Modern Store Fixtures." The subject matter of this catalogue comprehends practically every feature of store furnishing. The book abounds in handsomely-executed cuts of manifold varieties of fixtures. The descriptive matter is intelligent and complete, and the general character of the catalogue such as would seem to entitle it to the comprehensive name by which it has been designated. Jewelers, especially those contemplating re-equipment, will find much in it to interest them. It is mailed by the company on receipt of twenty-five cents to cover postage.

The Superior Mfg. Co., of Ann Arbor, Mich., has issued a handsomely-printed catalogue, which

illustrates and describes the lamps and lighting systems manufactured by this company. This compilation contains a great deal of information of interest to jewelers, especially in view of the success with which gasoline is meeting as an economical and satisfactory light for the store and for the home. The booklet forcefully advocates the Superior Mfg. Co.'s systems, claiming that they produce a brighter and steadier light than gas or electricity, while costing considerably less. A copy of the catalogue, an illustration of which is here shown, will be forwarded to any dealer on request.

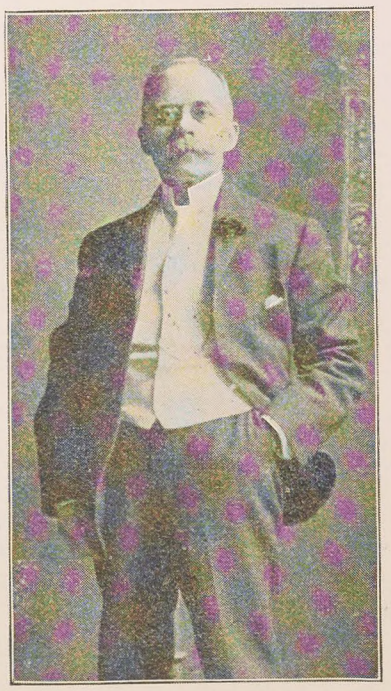
The jewelry store of Haynes Bros., of Newark, Ohio, has been robbed periodically for the past two years, and it was only within the past month that the identity of the perpetrator was discovered. The *Daily Advocate*, of Newark, states that on Monday evening, September 19th, George Crawmer, who, it seems, was well known by the proprietors and one of their constant visitors, made a call at the store. A moment later both of the Haynes brothers happened to go out of the main store, and Crawmer, it is said, passed behind the counter, slipped open a show-case door and quickly extracted five diamond rings worth $518. As he had been suspected of robbing the firm, the rings were quickly missed and the police were notified. Crawmer was soon afterwards arrested. Among others who called at the prison to see Crawmer was James T. Haynes. "Hello, George," was Mr. Haynes' greeting, and the prisoner glancing up to see who spoke, replied, "How are you, Jim?" He then tried to say something further, but broke down and cried like a child. Later he told Mr. Haynes that he had been robbing the store for two years. He admitted that he had taken a diamond worth $215 from the store two years ago and this, he declared, was the first he had stolen there.

H. P. Sinclaire & Co., a corporation organized some time ago at Corning, N. Y., with a capital of $50,000, is completing the erection of a glass-cutting establishment in that place. The directors of this company are H. P. Sinclaire, who for years has been prominently identified with the glass-cutting business in Corning; H. H. Kendall and F. C. Williams, both of Corning. In May last a large plot of ground was purchased in the eastern part of the city, and it is on this that the factory is being erected. The new building will be of brick and steel, two stories in height with basement. It will be approximately 60 by 120 feet in dimensions, and will accommodate from 125 to 150 frames. It will be so constructed that it can be easily added to without inconvenience to the force which may be already at work in it. Pending its completion, Mr. Sinclaire leased on short term the Corning Stove Works property, on Front Street, Corning, and began operations. The new building is now on the verge of completion, however, and no doubt business will be begun there immediately upon a much larger scale than has previously been conducted.

Moseley has been making lathes for a good long time, and the thoroughly reliable Moseley lathes for moderate money are the result of his painstaking efforts. —*Adv.*

Reward for Absconder's Arrest

John R. Stadlinger, of 7 West Chippewa Street, Buffalo, has offered a reward of $25 for the arrest of a man named A. J. Hogg, alias J. Johanson, alias Merill, alias Strauss, a watchmaker, whose



A. J. Hogg, alias J. Johanson

picture is shown herewith and who is alleged to be guilty of the larceny of a number of watches. He is fifty-five years old, about five feet three inches, with a heavy gray moustache; he is near-sighted, has large protruding eyes and wore a gray suit of clothes. Communications regarding him should be sent to Wm. S. Bull, superintendent of police, Buffalo, N. Y. This swindler is said to have victimized a number of jewelers.

Just think for a moment . . .

what proportion of the hundreds of persons who daily pass your store, stop to look at your window displays—one in ten?

Would you like a window attraction—free of cost—so uniquely handsome that it would stop probably fifty per cent. of the passers-by?

IN our 1904 posterette, we offer you the most attractive thing of the sort ever shown in a jeweler's window.

The posterettes that we supplied last year were, as you know, finer than any we had gotten out in previous years; but this one, which we have ready to send you now, is infinitely handsomer and more striking.

It is a faithful reproduction of a fine water-color painting, printed in rich, warm colors and mounted on a heavy mat-board panel, fifteen by nineteen inches—a refined, artistic production well worth framing and preserving.

With the posterette and a good assortment of Simmons Chains to include in one of your holiday displays, you would be ready to enter—as we certainly hope you will—our annual Window Dressing Contest, which begins November 15th. The prizes are:

Twenty-nine Bags of Gold

aggregating $500.00 in cash, to be distributed as follows:

$100. in GOLD to the jeweler with the best window display
$75. in GOLD to the jeweler with the second best window display
$50. in GOLD to the jeweler with the third best window display
$25. in GOLD to the jeweler with the fourth best window display
25 bags of GOLD—$10. each to the twenty-five jewelers whose displays rank next

And these are the only conditions for the contest:

The window displays must be made between November 15th and December 25th, 1904, and shall be of not less than three days' duration.

Windows may be dressed with any class of goods the competitor desires, the only condition being that Simmons Chains, and the posterette shall form an important part of the display.

Photographs of the displays must be sent us on or before January 15th, 1905, with name and address of competing jeweler marked plainly on back.

Prizes will then be awarded by a committee of three, and as soon thereafter as possible an announcement of the prize winners, together with reproductions of the winning displays, will appear in the *Jewelers' Circular-Weekly* and THE KEYSTONE.

You would have an equal chance with every other jeweler who will compete to win. The size of the store or of the window will not be considered when the awards are made; the prizes will be awarded strictly on the artistic merits of the displays. In previous years, the honors have been pretty evenly divided between the big places and the little towns and the chances are, it will be the same this year.

Write for the posterette, anyway—it's yours merely for the asking; you can rest assured that it will attract universal attention and increase the drawing power of your window displays several fold.

R. F. SIMMONS COMPANY

ATTLEBORO
Massachusetts

Providence and Attleboro

Jewelers Honor Visiting Odd Fellows

An interesting event in the business, no less than in the social life of Attleboro, was the recent visit of the delegation of Odd Fellows from Canada, and the elaborate reception accorded them. The banqueting, speechmaking and spectacular features were typical of a great fraternal reunion, and the participation of so many local business men and firms gave it additional importance. Among the firms which opened their factories to the visiting brethren were: S. O. Bigney & Co., the James E. Blake Co., the R. F. Simmons Co., the W. H. Wilwarth Co., McRae & Keeler, and the Daggett & Clap Co.

School of Design Begins Second Season

The enrollment of students for the second year's work in the jewelry department of the Rhode Island School of Design, Providence, began on September 12th, and one week later the classes got together prior to settling down to work. The first season's work has been all that could be desired, and now that the activities of the school have become well known, its usefulness demonstrated and its instructive facilities increased, the second year of its existence will, no doubt, show a still greater measure of progress. Mr. Homer, director of the school, follows the schemes adopted in European schools; to which are added such branches as seemed to meet special needs of this country. The work is in direct charge of the two best men who could be found, Charles E. Hansen and Robert Bain, both employed at the Gormam Manufacturing Co. plant. These men were trained in European schools, are masters of their trade and capable instructors. The Manufacturing Jewelers' Association expressed its interest by the appointment of an advisory committee on the jewelry department, consisting of E. C. Ostby, William C. Codman, William L. Mauran, J. E. Straker and Theodore W. Foster, who have rendered valuable service in promoting the welfare of the department. Between forty and fifty young men took advantage of last year's classes, putting in three evenings a week, two at modeling and drawing and one at practical bench work. It is expected that the manufacturing jewelers will contribute this year about twenty scholarships of $18 each, paying for the tuition. These are given by firms, and every firm which makes such a donation is entitled to name the person who shall receive the benefit, and the school makes reports from time to time as to the kind of work the student is doing. With twenty scholarships filled, the attendance at the design classes should be considerably larger.

Manufacturing Jewelers' and Silversmiths' Association

The annual meeting of the New England Manufacturing Jewelers' and Silversmiths' Association, which was to have been held on Friday, September 16th, has been postponed until Friday, October 21st, when officers will be elected and the following amendments to the by-laws acted upon: "Article 13—Meeting of stockholders. Strike out 'September' and insert 'October.' Article 13—Meetings of winter banquet and summer outing. The meeting for the winter banquet shall be held on the third Friday in February of each year, and the meeting for the summer outing shall be held on the third Friday in June of each year, or if deemed essential, at such other time as the executive committee may appoint, sanctioned by the board of governors."

Death of Albert Walker

Albert Walker, senior member and treasurer of the A. Walker Co., of 152 Weybosset St., Providence, manufacturing jewelers, dropped dead on the morning of September 15th, in the jewelry store of A. P. Hendrick on Main Street, Nashua, N. H., from heart failure, while engaged in displaying samples of gold watch chains to George W. Hendrick, one of the latter firm. Mr. Walker, who had been going to Nashua as salesman for his house for the past forty years, and who had dealt for decades with the Hendrick firm, arrived there on the evening of the 14th, and, as had been his custom frequently, stopped over night with George Hendrick at his invitation, the two men having been almost life-long friends. He made no complaint of feeling ill, and next morning after breakfast accompanied Mr. Hendrick down to the store. The two men had just proceeded to business and Mr. Walker had opened his sample trunk containing about $50,000 worth of jewelry, and had laid some chains out on the counter when, without warning, he fell backward to the floor and expired immediately. Dr. J. W. Woodward, whose office is over the store, was summoned, and his response was instantaneous, but death had been before him. The police of the city were summoned, and Chief A. S. Eaton and Inspector Edward Field answered the call. Medical Examiner Dr. J. F. Greeley came and pronounced death due to heart disease. Howard L. Carpenter, one of deceased's partners, upon learning by telegraph of the occurrence, went immediately to Nashua and had the remains conveyed to Providence. Mr. Walker was born in Attleboro, Mass., about seventy years ago, and learned the jewelry business in the factory of Freeman Bros., of that place. About forty years ago he was compelled to leave the bench on account of his health, and soon after started in the jobbing business in a small way. He always remained in the same line, gradually increasing the business, and had been located successively on Eddy, Pine, and Westminster Streets, Providence, the company's present location being 152 Weybosset Street, that city. The business was incorporated about four years ago, Franklin A. Balcom and Howard L. Carpenter being admitted, the former being elected president and the latter secretary. The company will continue business as before, according to Mr. Walker's desire, the remaining members acquiring a controling interest in the stock and being also entrusted with the interest of Mr. Walker's estate. His funeral was held on Sunday, September 18th, from his late residence, 167 Medway Street, and was attended by manufacturing, jobbing and retail jewelers from all over New England. The floral tributes were many and profuse.

The Attleboro Aluminum Co. has succeeded O. W. Hawkins & Co., of Attleboro, whose plant and business were sold out some time ago. The new firm has leased the basement of the new Eden Building, on South Main Street.

Charles M. Robbins, of the Chas. M. Robbins Co., entertained a large party of friends at his summer home, Greenwood Park, on Labor Day. The guests were all former residents of Cape Cod or descendants of some of its settlers.

The recent celebration of the ninetieth birthday of William Sturdy, of Providence, brought together four bearers of that name, three of whom are well known in the jewelry business of this section, and one whose age is as yet measured by months, but who bids fair to maintain the trade traditions of his forbears. Participating in the celebration were William A. Sturdy, of W. A. Sturdy Mfg. Co., Chartley, founder of the jewelry industry in that place, son of the nonogenarian celebrant, and third of the name; Wm. M. Sturdy, of Sturdy Bros. & Co., Chartley, fourth of the name, and his son Wm. Sturdy, a promising boy of three months and, no doubt, a manufacturing jeweler in embryo.

E. A. Codding, of Codding & Heilborn Co., North Attleboro, has been on a vacation outing in the Northwest, New York State and Canada.

G. S. Titus is the new Western representative of Codding & Heilborn Co., North Attleboro, and his headquarters are in Chicago.

Major Everett S. Horton, of the Horton-Angell Co., Attleboro, was last month elected president of the association of the 47th Massachusetts Regiment survivors.

Interesting Foreign Watch Exhibit at the St. Louis Exposition

In the magnificent German section of the Varied Industries Building at the St. Louis Exposition are many exhibits of special interest to the jewelry trade. One of these is the handsome display of A. Lange & Söhne, of Glashütte, Saxony, well-known manufacturers of high-grade watches and chronographs. This firm was established in 1845, and is honored in the German trade as the founders of the precision watch industry of Saxony. The peculiar excellence of their product may be inferred from the fact that they have been awarded twenty-six first prizes at the world's greatest expositions. Their exhibit at St. Louis comprises in addition to watches and chronographs, a comprehensive display of micrometers and other instruments of precision, all showing wonderful ingenuity, scientific accuracy and constructive skill.

The watches are of various sizes, and many of them are unique in design and finish. The decorative work on the cases is particularly rich and striking, some of the ladies' watches being beautifully finished in enamel, with rich diamond settings. Especially noticeable are two cases of great beauty designed by Prof. Graff. Fine decorative work on silver cases is also shown, some of these representing hunting scenes in fine chasing. There are also pretty samples of the new engine-turning finish called "Moiré," which is very effective.

An interesting part of the exhibit is a display of repeating watches or chronographs, some of these being in small sizes for ladies. The famous Tourbillon movement is also shown and is given much attention by the visiting trade.

Production of Metals in the United States

In the year 1902 the total value of the metalliferous product of the United States was $642,258,584. Iron is easily first, the output being valued at $372,775,000. Next in importance comes gold, with a production valued at $80,000,000, closely followed by copper at $76,563,954, this value being less than that of the preceding year, although the tonnage was greater. The value of silver produced in 1902 was $29,415,000, of lead $22,140,000, and of zinc $14,625,596. The United States leads the world in the production of iron, copper and lead. The United States now furnishes about twenty-eight per cent. of the lead of the world and twenty-six per cent. of the spelter, besides a considerable amount of zinc oxide.

Over one-third of all the gold mined in the United States comes from the southern division of the Rocky Mountains, chiefly from Colorado, which produces more gold than any other State.

1654

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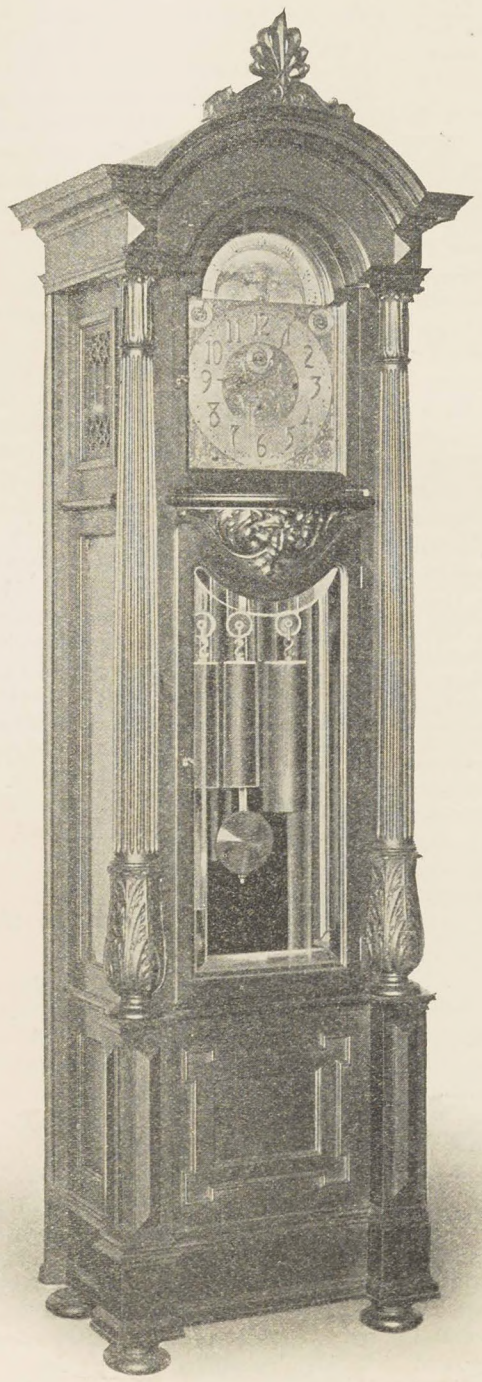

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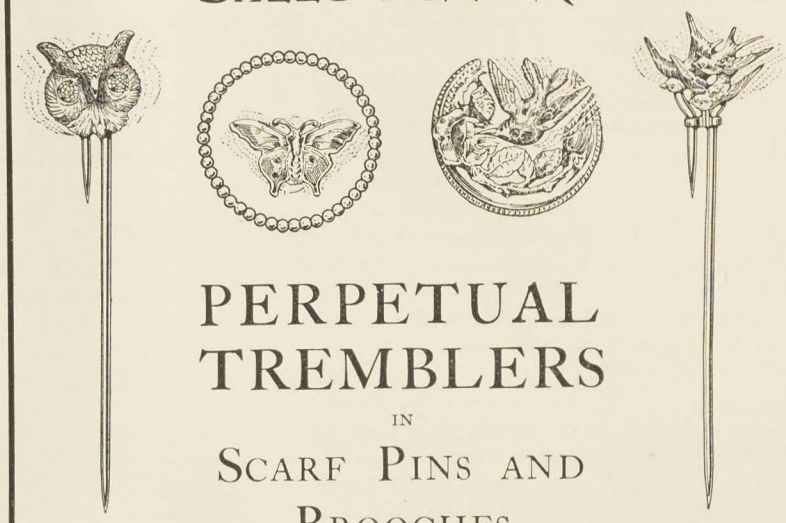

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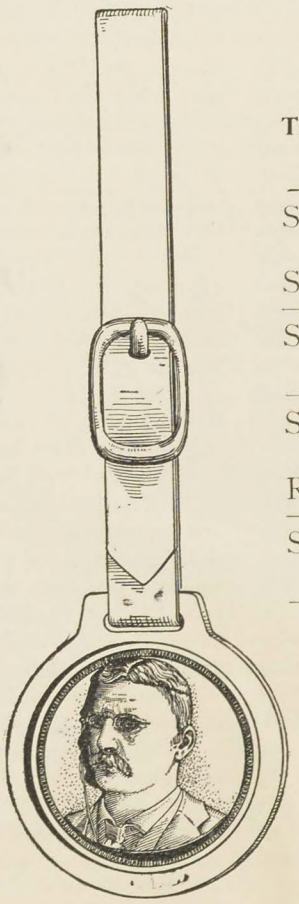

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Life Insurance as an Investment for Young Men

By JAMES H. HYDE, Vice-President of the Equitable Life Assurance Society of the United States, in Saturday Evening Post.

An Investment Without Capital

To speak of an investment without capital is almost an anomally; yet the operations of life insurance make such an investment possible. Indeed, they can create an estate for a young man during the very earliest struggles of his career, when his earning powers are at the lowest point; when any other kind of profitable investment appears to be beyond his most sanguine hopes.

Life insurance is adaptable, I may say indispensable, to the needs of all sorts and conditions of men; to the rich and the poor; to the high and the low; but as this article is to deal with it as an investment for young men only, I am going to assume that it is addressed to the average young man.

The first and uppermost thoughts in the mind of such a young man are: How can I go to work to acquire such a competency? How can I make a lot of money? How can I get hold of a fortune? Now, every man who has been through the mill and has come out victorious will tell the ambitious youth who asks him for a prescription for acquiring wealth that he must first learn to save every superflous dollar. This will be a difficult labor for the youth with budding hopes and increasing desires, but nevertheless he must undertake it, for in no other way can he get together any money for his first investment; the first that is to bring him a profit beyond the labor of his hands. Here is where life insurance comes in as an assistant of supreme importance, for it compels the young man to save a certain portion of his income.

The Principle of Life Insurance

To show why such a saving is attractive to our young man we must go back to the anomaly aforementioned. By the expenditure of a small sum annually he can purchase an endowment policy on his life for $1000, payable, with its accumulations, at the end of twenty years. From the moment that he has such a policy in his possession (always provided, of course, that it is taken in a reputable and financially-sound company) he has created an estate of $1000 for himself. This gives him a feeling of strength, of pride and satisfaction such as he has never known before; for he is now a capitalist. If he should die to-morrow the amount of the policy would be paid immediately to his heirs; and if he continues to live, the feeling of security which the policy gives to him will make him more free to invest in other lines another fraction saved from his income. Furthermore, if he lives to the end of twenty years he will get the thousand dollars himself, with the accumulated profits earned by the investment. Such investments, besides furnishing the protection of life insurance, are returning, and have returned for years, a higher percentage of interest on the amount of premiums paid than is now received from the United States Government bonds.

A small amount of money will buy this estate of $1000, and I venture to say there is hardly one man out of a hundred who cannot afford to make himself a capitalist to that extent as soon as he becomes a self-supporting man. Is there anywhere a who man who, being able to save such a sum, will not feel a thrill of pride and satisfaction in using it to create, by life insurance, a capital of $1000? Of course, he need not limit himself to $1000 if he can afford to purchase a larger estate, for just as a $1000 life insurance policy is good for a young man to purchase, so is a $10,000 policy ten times as good, if it can be afforded.

How Much Insurance You Should Carry

Here these three questions may be asked: How much insurance should a young man carry on his life? What relation should the amount of his policy bear to the amount of his other investments? There must be an infinite variety of answers to these questions, because there is an infinite variety in the circumstances of different men. But my earnest advice to every young man is to make an effort to save at least one-third of his income; and one-half of this saving can, in my opinion, be most advantageously used, from time to time, by investments in life insurance. Indeed, there is no other investment which can be paid for in small installments so conveniently. Thus invested, it will bring a return to his heirs in the event of his premature death; and if he continues to live he can accumulate the other half of his savings and use them for investments in stocks, bonds and real estate.

But I hear some one ask, Why use so large a portion of his income in that way? Because life insurance is the only agency offered for preserving his earning power, which is all the capital the young man has at the beginning of his career and sometimes all that he has for many years. His power to earn a living is to him what real estate, money and personal properties are to the capitalist, and for that reason it should be made secure by a life insurance. This is an important fact that is either overlooked or not understood by the majority of men. Let us suppose that our young man has married, or perhaps he has a family, a mother, a sister, to support. His earnings all that these persons have to depend on; they cannot live if his earnings cease, and he is unwilling they should take that risk. So he buys a life insurance policy which will provide money for them in case he is taken away before his time; and he also buys it for his own benefit in the event that he continues to live. The present improved forms of life insurance policies, as everybody knows, cover both of these contingencies, and the old sarcasm that a man has "to die to win" became obsolete long ago.

Insuring One's Earning Power

Many men make a mistake in not adequately insuring their earning power. It is a common thought of those who earn a couple of thousand dollars a year that this sum represents all the life insurance they need. The fallacy of such reasoning is apparent the instant you compare the earnings of $2000 at prevailing rates of interest with the annual income of the wage-earner. That is why I have said that a large portion of a young man's income should be invested in the purchase of life insurance.

If you hear a young man say that he is not going to buy any life insurance because he can invest his money so as to make more out of it than a life insurance company can, ask him to answer this question: "Who is going to guarantee that you will live long enough to carry out your plans of investment?" If he replies, "Oh! I am willing to take that risk," you can remind him that it is not himself, but those dependent on him who are taking "that risk." Life insurance does not guarantee that any man will live for a definite period; it only guarantees that it will pay for his life an equivalent which shall be proportionate to the amount of premium that he has invested in the policy. No young man can afford to "take that risk" so lightly spoken of; but if every young man will let some strong life insurance company insure his life, if he is insurable, the future welfare of those dependent upon him will be secured beyond peradventure and his road to success will be easier to travel.

The Compulsory Savings Bank

A bank, so far as it helps a young man to save money, is but an improved and modernized stocking or teapot—the savings depository of country people in colonial times. It is as easy to take money out of a bank as it is to put money into it; so easy that a young man who opens a bank account for the purpose of saving money for investment finds, too often, a reason for spending the money before he has deposited enough to buy a $500 bond. The difficulty is that there is no compulsion on him to save money, as there is when he has started to pay for a life insurance estate. A young man's character is always benefited when he has been compelled to do a certain thing which is to require his continued effort and will keep his eyes riveted on an advantage ahead. I am reminded of the pathetic remark of a traveler who sank weary and worn at the foot of a rugged cliff, and looking up saw another wayfarer reach the top. "It seems," he said, "to take less strength to climb this cliff than to decide to do so." Once the decision is made, and you buy a life insurance, you will find that the payments of premium are easier after the first few years. I have noticed that an invariable comment of many a business man, when reaping the benefits of life insurance in after years, has been, "How much I regret that I did not take several times as much life insurance as I did when I was a young man and was an acceptable risk, and could have secured it at a low cost."

Insurance for the Rich

The careful reader will observe that all I have said is quite as applicable to the young man who begins his business life with money to invest as it is to his impecunious brother; and that if life insurance in small amounts is a good thing for the latter, it is good in larger amounts for the former. For different circumstances different forms of policies are devised to cover the various needs of one's life. I cannot hope in this article to explain the various forms issued by life insurance companies; but generally speaking, a policy of life insurance can be separated into two parts: first, there is the element of protection; second, there is the element of investment; and policies vary chiefly according to the proportions in which these two elements are combined. The protective or assurance element predominates in what is called a life policy; the investment element in what is called an endowment policy, such as I have recommended in this writing. In each the benefits are the same in case of death, but the returns to those who continue to live are greater under the endowment form. After the birth of a child its parents sometimes take an endowment policy, which is calculated to mature at a special time; perhaps when a college education is to be provided for, or money will be needed for a start in business, or for a marriage settlement. Many business men of the present day who have learned the value of life insurance encourage their sons to insure their lives early; for they know that the earlier it is taken, the earlier in life will the benefits accrue.

Fruits of Life Insurance

Let me now recapitulate a little. My opinion is that a young man should take life insurance at the earliest possible time; that he should take as much as he can conveniently pay for, and should increase it as his income increases. For these opinions I offer the following reasons:

Because his investment inculcates habits of thrift in the investor.

Because the young man who makes it places himself under a voluntary compulsion to lay something by every year.

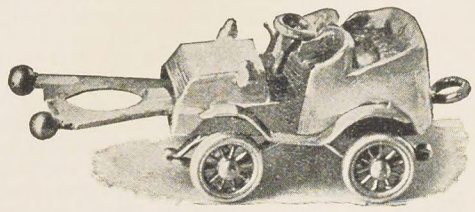
Because there is nothing safer than a conservatively managed life insurance company founded on scientific principles; there can be no "run" upon such a company during times of financial disturbance.

Because the chances are that some day he will marry and need the insurance to protect the future of his family; he will be wise if he obtains it while he is known to be an acceptable risk.

Because it will increase his self-respect and self-confidence; it will strengthen his reputation also, for business men will judge youthful character by such a token of thrift.

Because an endowment policy, at any time after it is three years old, will furnish to the extent of its value the very best collateral for any security that may be desired.

Because (and this is the paramount reason) life insurance is the only way in which a comparatively large estate can be immediately created by the payment of a small amount of money. It protects all that a young man has that is valuable, in the same way that fire insurance protects a building. The chances are 99 out of 100 that the building will never burn. The chances are 100 out of 100 that such a life insurance policy as I have recommended will be paid within twenty years. The payment will be due either by the completion of the endowment period, or previously, by death.



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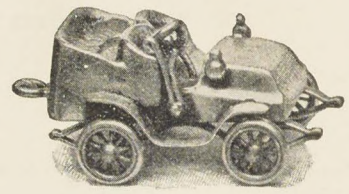

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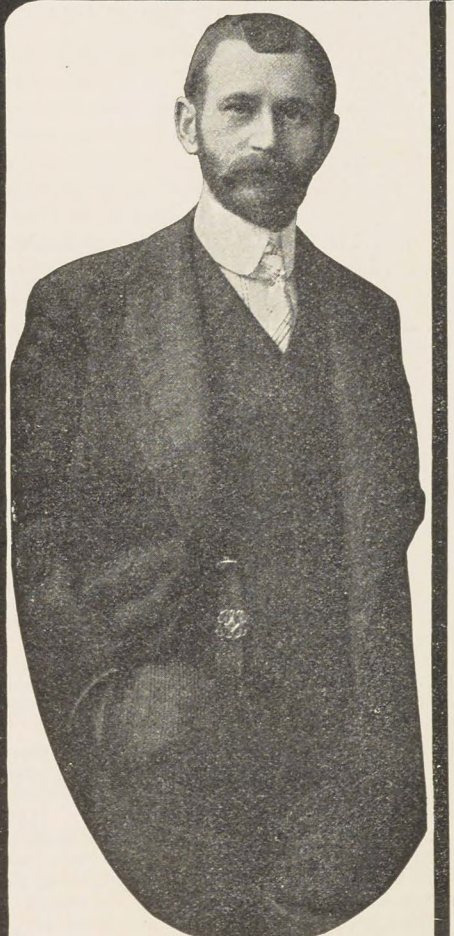

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The Black Diamonds of Brazil

The black diamond is an important article of commerce, not because it is destined to embellish the hand of feminine grace, but because of the fact that it has been widely applied in industry, where it is almost as valuable as its white fellow. The home of the black diamond is Brazil, the classical land of the diamond; the richest beds of the mineral having been found in the province of Bahia and on the banks and in the bed of the Sao Jose River. The stone, which is perfectly opaque, is not beautiful; and if the magical word diamond had never been applied to the substance, there is no doubt that to this day the black diamond would be a thing unknown. However, the favor which this mineral enjoys is of very recent date; for twenty years ago its properties were unknown and the trade in it was practically nothing.

The constantly increasing perfection of boring instruments brought out the value of the black diamond, the use of diamond-point drills now having become so general that the price of the mineral has, in consequence, rapidly increased. To-day, the diamond has become of prime necessity in working tempered metals, sawing of marbles, piercing of tunnels and galleries, and in mines. At the time of the inauguration of the laboratory of arts and trades the first of July, 1903, a circular saw provided with diamond points produced surprising results, cutting into thin slices the hardest of materials. On the banks of the Sao Jose we find the traces of the first exploitation of the mines by the natives, the Garimperos. The black diamond, however, having no commercial value, did not attract these people, and they were apparently ignorant of the real character of the mineral. From the report of an engineer who explored the region in 1858, we learn that one day the diamond diggers discovered a black stone in the Sao Jose. They took the stone to one of their huts and sought to discover its nature by attempting to crack it. All their efforts were fruitless, the stone resisting the most powerful hammers, and after a time it was thrown back into the river. The stone weighed about 10,000 carats, and at the present price of $40 a carat represents a loss of $400,000.

The exploitation of the Brazilian diamond mines by the Garimperos, it is unnecessary to say, was not scientific. The crevices of the rocks are explored with the hand, the gravel being taken away in little barrels, which are carried on the head. Attempts have been made to lessen the time of the work by diving for the mineral, but the violence of the stream is such during the rainy season that this plan has been but little adopted. The only method which will produce results, and the one which will shortly be put in operation, is that of draining. Dams will be erected three hundred feet apart, and centrifugal pumps will be installed for the purpose of drawing off the water. The results of the work cannot be a question of doubt, judging from the past performances of these diamond mines.

Getting Gold from Pyrites

The process of gold extraction which has been put in practice in Italy by the Belgian chemist Body, is awakening great interest among metallurgists. A few years ago the English geologist Morse and others observed that wherever there were placers of free gold there was also to be found in the neighborhood a source of combined gold in a volcanic matrix which was much richer in the metal. This theory has just been confirmed in a striking manner by M. Body. The process which he is now using in Italy is in reality only the geneological synthesis of the formation of alluvia and confirms the theory which attributes the formation of the placers to volcanic action.

The process is based not upon the elimination of sulphur, but upon its addition. Although this seems in contradiction to the present metallurgical processes, the result is said to be remarkable, and the output of gold obtained in this way greatly exceeds that which is given by the usual processes. The method is founded on the polysulphuration which is obtained by chemically disaggregating the mixture by means of special salts, under the influence of a temperature which does not exceed a cherry red.

The process is of a relatively short duration. The disaggregating action removes the gold from its most stable compounds. At the Piedmont works, where the process is now employed, it costs only $2 or $3 to treat a ton of ore. It should be remarked that the new process is not an extraction of the gold, properly speaking, but a process of transforming the pyrites, which is so difficult to treat, into a product which can be worked in the ordinary way. As gold-bearing pyrites exists in great quantities in nature, the new process is likely to prove of great value.

Significant Prosperity of the Railroads

The latest railroad reports are a good indication of business conditions generally. After a temporary falling off in the traffic incoming reports show a very material increase with prospects of such an expansion in the volume during the fall as will again tax the now immense railroad facilities of the country. While it is not to be expected that traffic and earnings will continue to increase at the remarkable rate of the past five years, the pessimistic predictions of last spring have already been proved unfounded.

The railroads are one of the great industries of the country in which jewelers are directly interested. Their prosperity, under the now almost universal system of watch inspection, means profitable business for the watch trade. The wonderful prosperity of the American roads during the past half decade may be best realized by comparison with the railroads of our leading commercial competitor, Great Britain. In 1903 the earnings of British roads from freight traffic were only 5.74 per cent. more than in 1899, the increase in five years in passenger traffic earnings was only 9.64 per cent. and the increase in total gross receipts was only 9.1 per cent. From 1899 to 1903 the freight traffic of railroads in the United States increased 46.19 per cent., the number of passengers carried increased 74.73 per cent. and gross receipts increased 43.89 per cent These figures furnish startling proof of the phenomenal prosperity with which our country has been blessed during the past five years, and there is as yet no sign of any turn in the tide of our good fortune.

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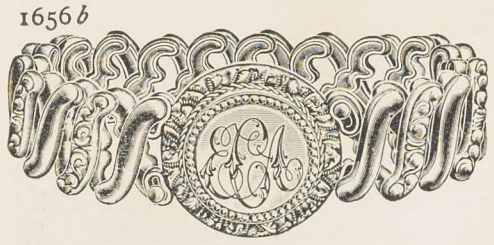

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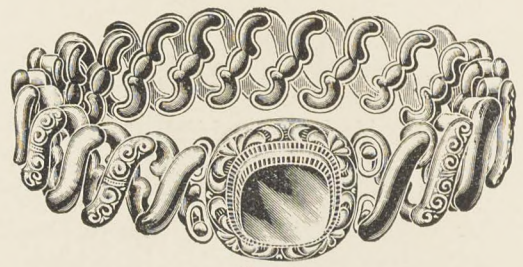

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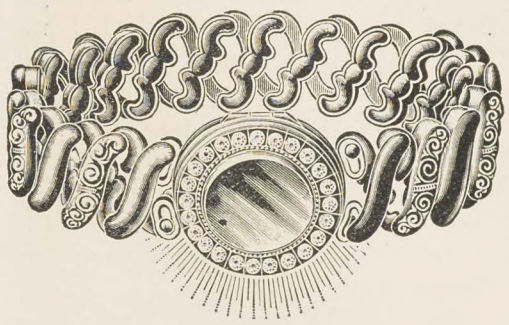

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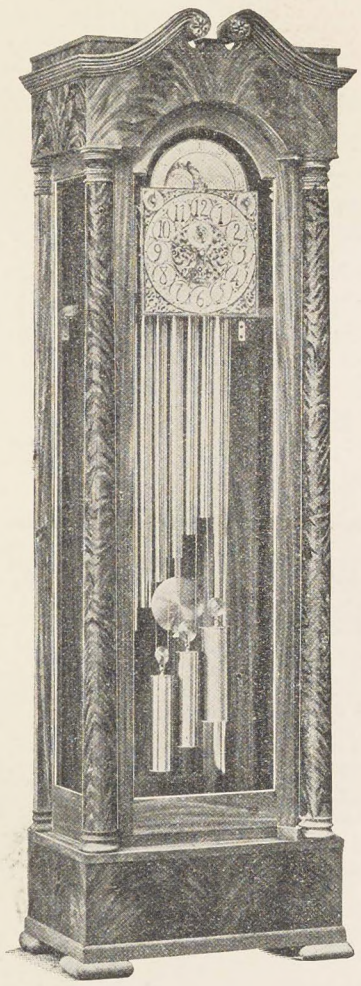

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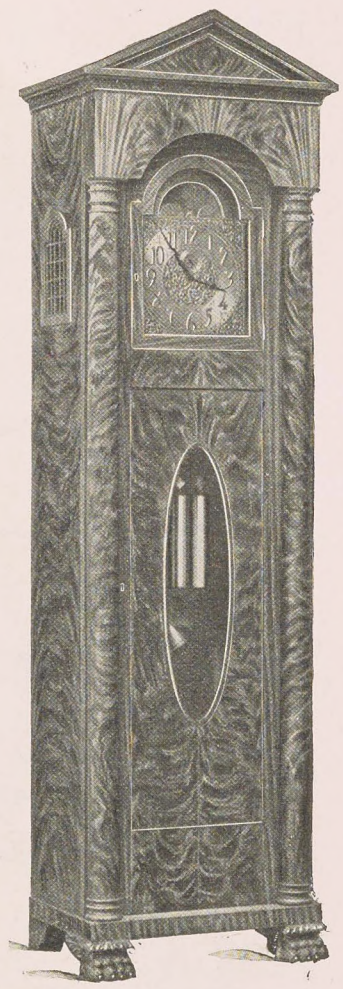
THE ROYAL FURNITURE COMPANY

GRAND RAPIDS, MICH.



REMEMBER THE TWO WORDS

"MEYER" AND "QUICK"

NO MATTER WHAT YOU WANT IN THE LINE OF SPECIAL ORDER WORK. EMBLEM JEWELRY, BADGES OF ALL KINDS, SCHOOL AND COLLEGE PINS, SPECIAL DIAMONDS, REPAIRS, ENGRAVING AND WATCH REPAIRING, YOU CAN GET IT FROM

MEYER AND GET IT QUICK

THE FOUR THOUSAND RETAIL JEWELERS IN THE TERRITORY TRIBUTARY TO KANSAS CITY WILL ALWAYS FIND US THE "HURRY-UP MANUFACTURING JEWELERS FOR HURRY-UP DEALERS." DO BUSINESS WITH THE PEOPLE WHO DO BUSINESS QUICK. SIXTY PEOPLE TO SERVE YOU.

MEYER JEWELRY COMPANY

KANSAS CITY, MO.

1656 d

Umbrella Handles

and Accessories

IN CONJUNCTION WITH OUR GOLD AND STERLING UMBRELLA HANDLES, WE HAVE MADE FOR THIS SEASON, TO MATCH THE HANDLES

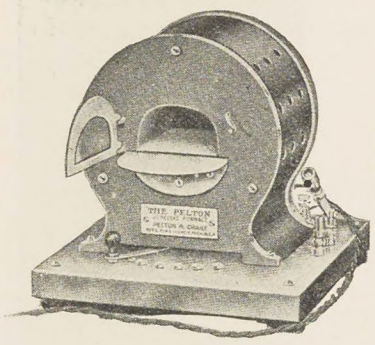
"Tip Cups" **"Rings and Buttons"** (Tie Clasps) **"Ferrule Covers"**

SHOWN BY PROMINENT UMBRELLA MAKERS. IF YOUR UMBRELLA MAKER CANNOT SUPPLY YOU, WRITE US. Our Trade-Mark, **W. J. B. & CO.**, on all our Goods

Our goods are warranted to give satisfaction. The reason—we make our own gold rolled-plate

W. J. BRAITSCH & CO.

396-8 Broadway Established 1887 **NEW YORK**



The Pelton Electric Furnace

Guaranteed and manufactured by
PELTON & CRANE, Detroit, Mich.

A few things you can do with a Pelton better than with any other furnace

Fine enameling
Hardening of steel hubs and dies
Tempering of all kinds of steel tools and dies
Invaluable in the laboratory

For further information, address

HUGH E. KING, Sole Agent, 230 Adams St., CHICAGO

SPECIAL NOTICE **Furnaces for sale and carried in stock by J. GRANT HAWKES & CO., 33 Exchange Place, Providence, R. I., who are the General Agents for the New England States**

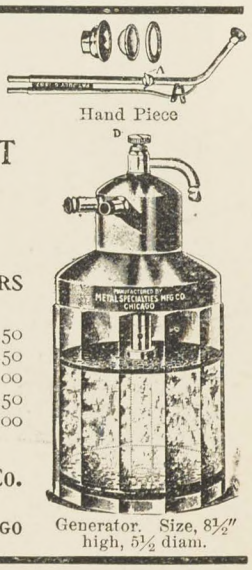
SAMS' SAFETY BLOWPIPE OUTFIT FOR JEWELERS

The original Sams'—
Greatly improved

FOR SALE BY ALL JOBBERS

Outfit complete,	$12.50
Outfit without Bellows,	8.50
Generator (B)	6.00
Blowpipe (A)	2.50
Foot Bellows (C)	4.00

Metal Specialties Mfg. Co.
(Sole Mfrs.)
18-24 W. Randolph St., CHICAGO



Generator. Size, 8½" high, 5½ diam.

F. H. NOBLE & CO.

SALESROOMS
103 State Street
Chicago
51-53 Maiden Lane
New York

59th and Wallace Streets

Manufacturers **Chicago**

Jewelers' Supplies of Every Description

Catalogue to the Jobbing and Manufacturing Trade

Special Articles manufactured
Badges, Medals, Class Pins, Flag Pins and Society Emblems in Gold, Silver Rolled-Plate and Bronze Enameling in Colors for the trade

GOLD AND SILVER SOLDERS

We make 10 Karat Rings which are

TEN KARAT

Ask your Jobber for them

DAMM & BLOCK

MANUFACTURERS OF

10KT RINGS

TRADE MARK. STAMPED IN 10KT RINGS

507-515 WASHINGTON ST.

SOLE MAKERS OF
The Solid One Piece Fancy Set Rings.

BUFFALO, N.Y.

The Keynote to Business Success

Personality the Cardinal Element in Every Enterprise—Brains, Energy and Judgment the Factors for Success

PERSONALITY furnishes the keynote to every business proposition. More than that, it is the cardinal element in every enterprise. Men, not money, are the determining factors in commercial and industrial undertakings.

Of course, you cannot do business without capital; but the brains, the energy, the judgment with which the capital is used really settle the success of the undertaking in hand. Money and securities are the ammunition of business. The battle for success cannot be fought without these, but the main question after all is: What is the ability of the men behind the guns?

By Way of Illustration

Let me illustrate this point, upon which I can scarcely place too much emphasis, by citing the case of two banks. They have the same amount of capital and of surplus; the same legal standing, the same limitations and same field of business, and equal opportunities in a general way. One of these banks has $50,000,000 deposits, against $25,000,000 for the other. The volume of other business shows the same ratio of difference. What accounts for this marked difference in the patronage and profits? There is but one answer: The personnel of the two institutions. The men at the desks and the counters of the more successful bank are adepts in the art of getting business, doing business and keeping business. They know how to appeal to public favor and confidence in a way that the executives of the other institution have failed to master. This is what makes their profits twice as large as those of their competitor and puts double the market value on their shares of capital stock.

This line of reasoning applies with equal force to almost every form of enterprise and to practically every kind of a business proposition. Of course, there are other elements, and important ones, too. These should not be overlooked, but it still remains true that when you have the right perspective on the right personnel connected with a business proposition you have, in most cases, the dominating elements necessary to a sound decision.

Character and Individuality

There are, however, many phases which must be considered even when you do not go beyond this one factor of the problem before you. First comes the question of the veracity, the moral standing, the personal character of the men connected with the proposition under consideration. Next comes the problem of their individual experience and knowledge in relation to the special enterprise in which you are asked to become interested. On a timber proposition, for instance, the judgment of a superannuated sawmill hand is worth more than that of a ranchman who has made a million-dollar fortune in raising range cattle.

Add to the element of adapted experience that of individual perception. Are the men associated with the proposition gifted with the discrimination to sift the wheat from the chaff? Have they, in the first place, the keenness of perception to see the weak spots of a proposition before committing themselves to it? And also are they shrewd enough to steer clear of breakers when once embarked in an enterprise? I would, under such circumstances, bank more on a statement which I believed to be somewhat exaggerated if it came from a man of strong business sagacity and the right kind of experience than I would on the statement of an individual lacking that perception, but of a thoroughly conservative habit of speech. The man who is able successfully to analyze a business proposition must not only have this faculty himself, but he will take good care not to associate himself with others who are lacking in this vital equipment.

Need of Business Intuition

In other words, a man may be thoroughly upright, of the highest personal character, and have had years of experience in the very lines of the undertaking which he presents, yet if he has not this ability to discern those more hidden influences which will naturally operate for success or failure of his project, he is not a safe man as an associate in the enterprise which he himself is putting forward. Often it would be better business judgment to enter into an alliance with a man who overstates his proposition, and whose statements are subject to a certain amount of discount, but who has the faculty of perception keenly developed, than to become associated with a man whose statements are of the ultra-conservative sort, yet who has not the faculty which, for the lack of a better name, may be called business imagination—the ability mentally to project himself into the future and call before his vision the more subtle and illusive influence which will vitally affect the success of the undertaking. This kind of perception makes millionaires.

Again, the age of the active men connected with any business project should always be taken into consideration. The familiar maxim of "Old men for counsel" is all right, but it should never be separated from its twin, "Young men for war." The probable tenure of service of the men responsibly connected with any project should first be as carefully considered by the investor as by the insurance company, which has reduced the problems of mortality to a science. Personally, I would scarcely consider any business project the success of which must depend upon the work of men past the meridian of life. The question of the period in which they may reasonably be expected to remain in the harness is too often overlooked.

Personal Equation Pre-eminent

So important are all these various phases of the personal equation connected with a business proposition that I scarcely felt it necessary to touch upon other points. With me this is the governing factor, although it must always be considered in connection with the more material factors. According to my experience and observation, it is here that the average investor is most likely to score a mistake. Here care and judgment will generally lead to a fairly correct analysis of the financial basis of any business proposition, but a correct understanding and judgment of the personal element is more difficult and requires a finer faculty of discernment.

A business enterprise that is a little weak in its finances but very strong in the personality of the men behind the guns is in better situation than if strong financially and weak in personnel.—*W. F. Upham, in System.*

Value of Good Appearances

A captain on one of the ferry boats plying in New York harbor tells the following story of the value of a coat of paint:

"Some years ago I owned a small sailing vessel engaged in the coast and West Indian trade. While we were lying at an East River pier taking on a cargo for the West Indies, a stranger approached, and, after critically eyeing my craft, asked:

"'What'll you take for that boat?'

"'One thousand eight hundred will buy her,' I told him.

"'I'll give you thirteen hundred,' replied the stranger. 'She's an old boat, and not worth any more.'

"I refused his offer, and he soon disappeared, but I made up my mind that I would spend a little money for white lead and oil, and when I was lying in port unloading the cargo I would have my men paint up the boat and improve her appearance. When I sailed into port again she looked as good as new. After reaching the pier I saw the same fellow walking about, looking the craft over. Soon he approached me and asked:

"'Excuse me, sir, how much will you sell her for?'

"'You can have her for $2,500,' I told him.

"'Call it $2,300 and I'll take her,' he replied, and it didn't take me long to accept the offer. I calculated I made a thousand on $20 worth of paint."

"I have a fine position here, now, and all through the magical power of inserting an ad. in your wonderful magazine, The Keystone."—E. J. Collick, Jeweler, St. Paul, Minnesota.

1656f

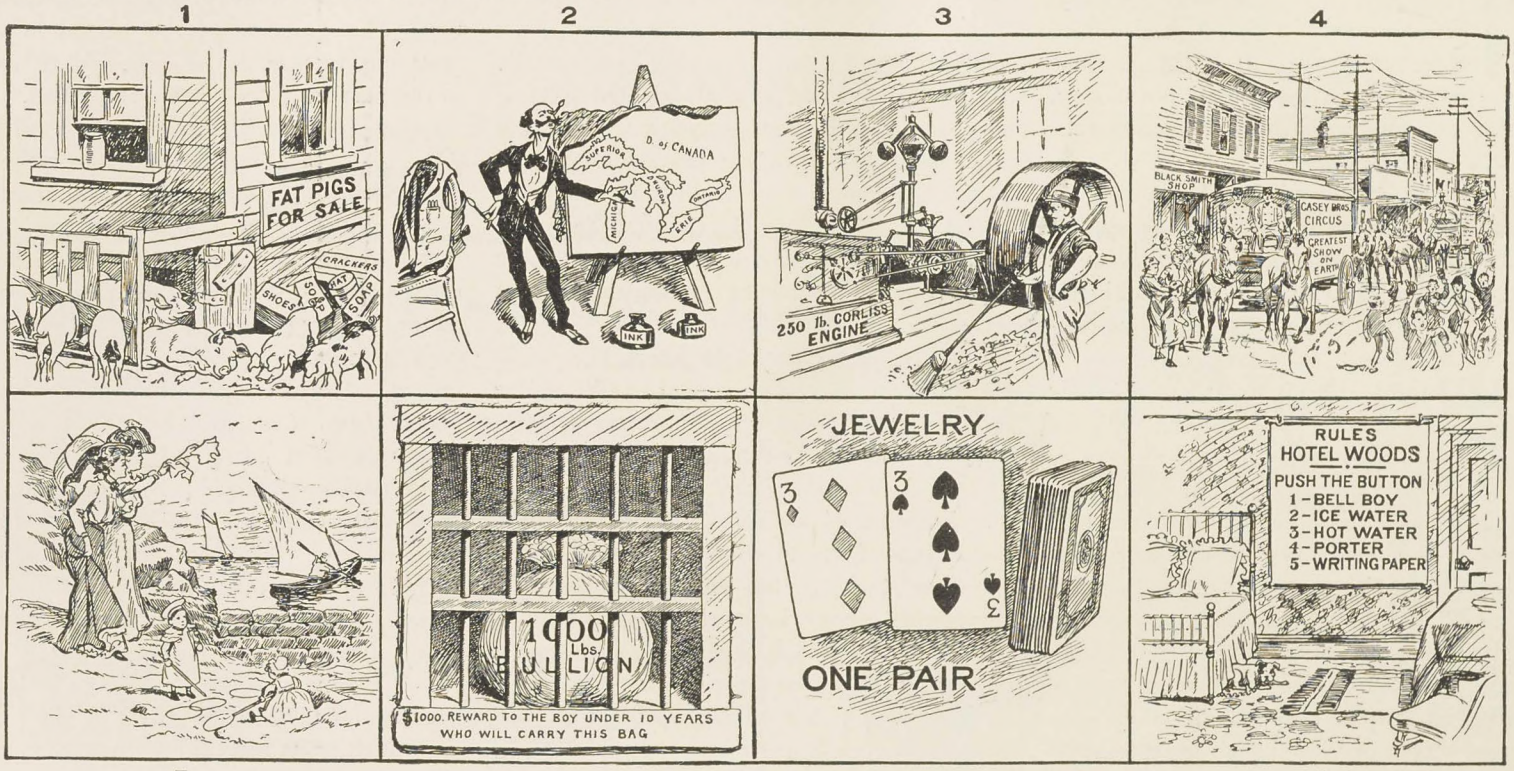
FREE! Big "4" Twenty-Five Dollar Puzzle Page FREE!

IT COSTS YOU NOTHING TO TRY IT

Each picture presents a common article in a Jewelry Store, for instance, a watch rack, thimbles, tissue paper, scarfpins, etc. Now, what do the pictures represent? For your skill in solving the puzzle, we will give for the first best correct solution, $15.00; 2d, $5.00: 3d, $1.50; 4th, $1.25; 5th, 75c.; 6th, 50c.; 7th, 8th, 9th and 10th, 25c. each, in tools, material, findings, etc., selected from any catalogue.

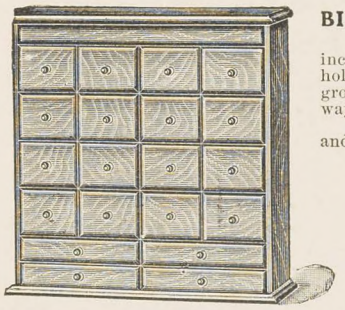
SPECIAL NOTICE The prize competition is FREE and open to JEWELERS and JEWELERS' EMPLOYEES ONLY. Each solution sent in must have the signature of the proprietor of the jewelry store. Number your answers the same as the pictures in the puzzle and use one sheet of paper in writing out your entire solution. Answers and names of winners will be published each month. There are ten prizes. Should there be two or more equally correct solutions the prizes will be divided equally among the successful competitors. The judges will consider the skill displayed and neatness of the work. Write your name plainly, and address all answers to Calvin Clauer Company so that they will not reach us before the 2d or later than the 31st of October.

1 2 3 4



5 6 7 8

This is for October—a new set of pictures next month



BIG 4 OAK OPTICAL CABINET

This cabinet is well made, it has 16 drawers, 6x4½x3½ inches deep inside. It has four lens drawers which will hold respectively 00-eye, 0-eye, 1 or 2-eye lenses. The grooves or compartments for these lenses are slant in such a way that all the numbers may be seen at once.

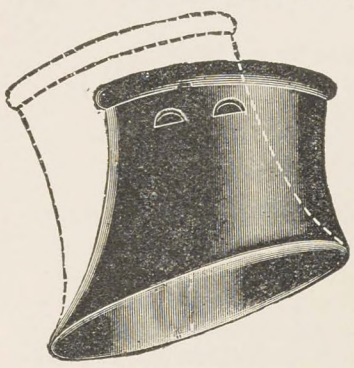
Size of Cabinet outside, 24½ inches wide, 26 inches high and 8½ inches from front to back, outside.

Our price, $8.15 net

$1.00	Pendant Screws, all sizes	per gross,	$ .42 net
5.00	Best 25-year Case Pendant Bows, assorted on a card, Antique or American, warranted 1/10 14 K. Gold and stamped	" dozen,	3.90 "
1.50	1 gross White Glazed 1 to 6 Nest Boxes	" gross,	.86 "
.20	Black Spectacle Cases, Straight or Riding Bow	" dozen,	.14 "
.50	1000 Watch Tags, medium size	" M.,	.33 "
.50	1000 Sheets of Watchmakers' Paper	" "	.36 "
8.50	Ball-Bearing Foot-Wheel, Best Swing	each,	5.90 "
35.00	Lathe Motors, Direct or Alternating Current	"	29.40 "

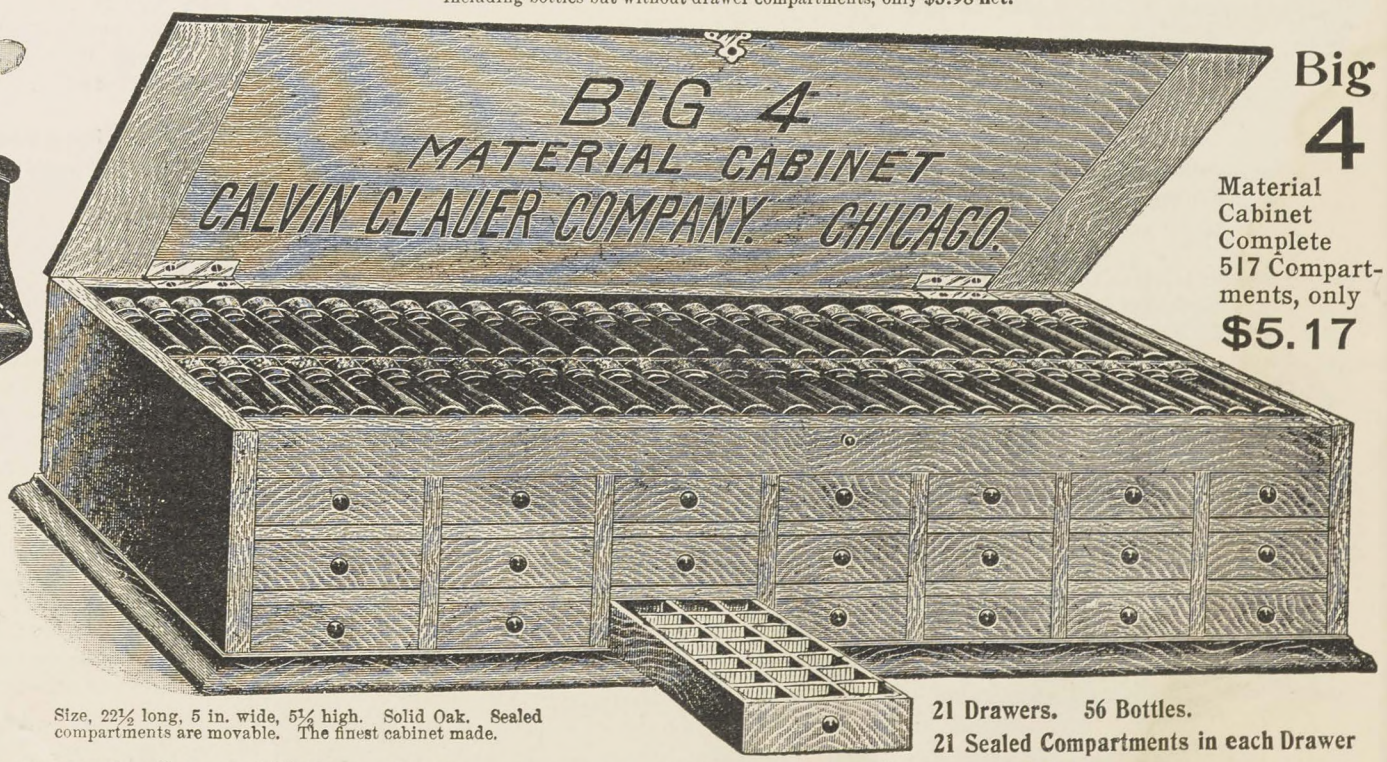
This is the FINEST Material Cabinet ever built

We ship them to Europe, South America, Canada and every State in the Union. With almost every shipment we get a complimentary letter. Cabinet, including bottles but without drawer compartments, only **$3.98 net.**



No. 100
The latest improved Rubber Eyeglass
Fits the eye perfectly. Focus 2, 2½ and 3.
Our price, 46c. net

Headquarters for Supplies.
Write us for prices on Signs, Lathes, Benches, etc.
Send us a trial order with your answer to the puzzle.



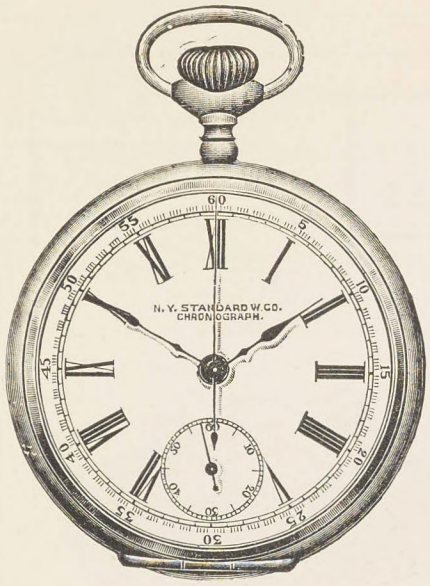
Size, 22½ long, 5 in. wide, 5½ high. Solid Oak. Sealed compartments are movable. The finest cabinet made.

Big 4 Material Cabinet Complete 517 Compartments, only $5.17

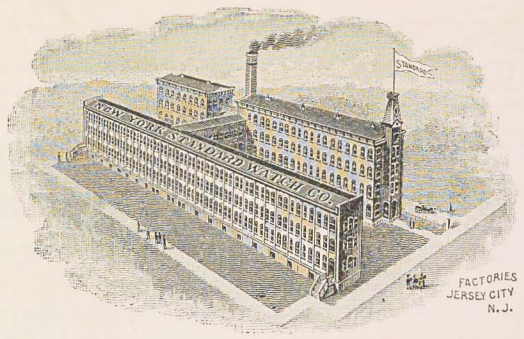
21 Drawers. 56 Bottles.
21 Sealed Compartments in each Drawer

CALVIN CLAUER CO., 151-153 Wabash Ave., Chicago

By special request we offer the above again with a few minor changes. We do this for the reason that none of our contestants sent in a correct solution of this "puzzle ad." on its first appearance



No. 514



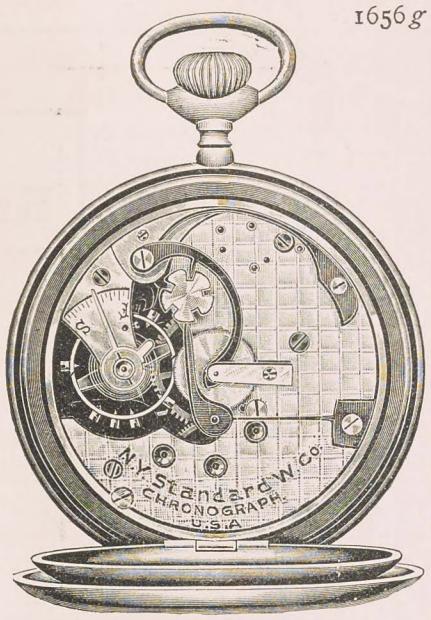
VICTOR NIVOIS

AGENT FOR

New York Standard Watch Co.'s

Chronographs

21=23 Maiden Lane **NEW YORK**



No. 514

No. 508

O. F., 18 size gold filled, 20-year guaranteed screw back and joint bezel. Horse-head

The attention of the trade is called to a newly-patented Chronograph Watch, with 1-5 second, start, stop and fly-back attachment, operating from the stem, very simple in construction and **as durable and accurate as the most expensive imported chronograph.**

This Chronograph Watch is manufactured exclusively for me by the New York Standard Watch Company, thereby insuring to the trade a perfect and reliable timekeeper, the accuracy of the 1-5 second, start, stop and fly-back attachment being the special feature of this watch.

These movements are cased in Nickel; Sterling Silver; 10-year guaranteed; 14 K., 20-year Gold Filled, and 14 K. Solid Gold Cases, made by leading manufacturers.

The **EXCEEDINGLY LOW PRICE** of this perfect timekeeper and Chronograph, in cases **FULLY GUARANTEED,** brings this watch within the reach of all classes, which will create a quick demand for it, a fact that makes it interesting to all jewelers.

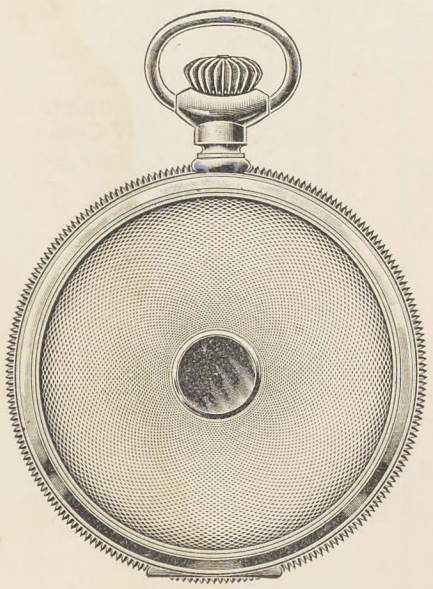
All parts of the Watch and Chronograph attachment **are interchangeable** and can be duplicated at once at small cost.

While these watches will not be in the market until November, jewelers should order at once from their jobbers in order to insure prompt delivery, as the advance sales have been unusually large.

If your jobber cannot supply these Watches, write us and we will furnish you the names of jobbers from whom they can be had

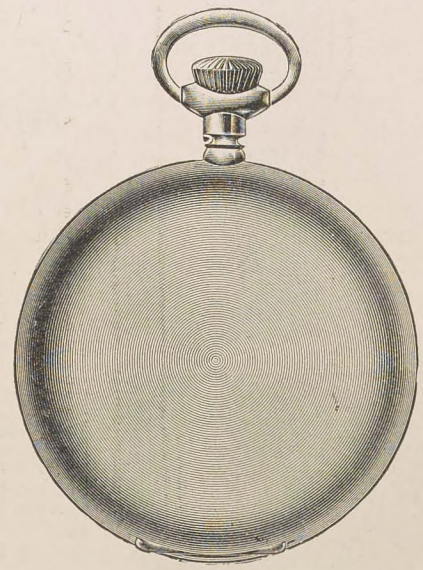
No. 510

O. F., 18 size gold filled, 20-year guaranteed, screw back and joint bezel. Horse and Jockey



No. 514

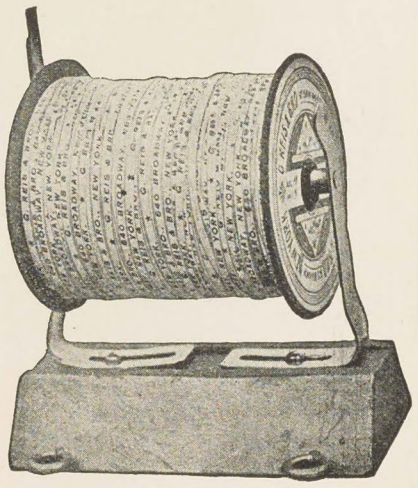
14 K., O. F., 18 size, cap, back and bezel jointed E.T.



No. 515

14 K., O. F., 18 size, cap, back, bezel jointed, P.P.

Reis' Advertising Tape Brings Jewelers More Business



A NARROW, closely-woven tape, to take the place of string in tying smart, secure bundles.

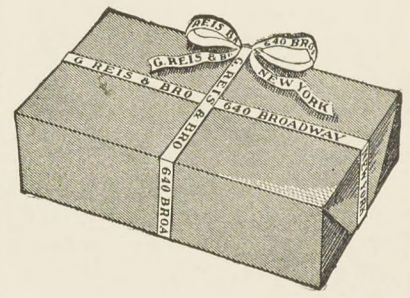
Your store's name and address are neatly printed four to ten times every yard throughout its entire length.

A trade-attracter without rival when you compare its great efficiency with its little cost.

Looks as well and ties packages better than ribbon—Two Dollars buys more than a mile.

Reis' Advertising Tape, made as narrow as one-sixteenth of an inch, is so strong and tight—so snug a tie for bundles of all kinds, that people notice it once, use it twice, and think of the store that sent it out whenever they want good goods again.

Samples talk. Send for some.



G. Reis & Bro.

TRADE MARK G.R.&B.

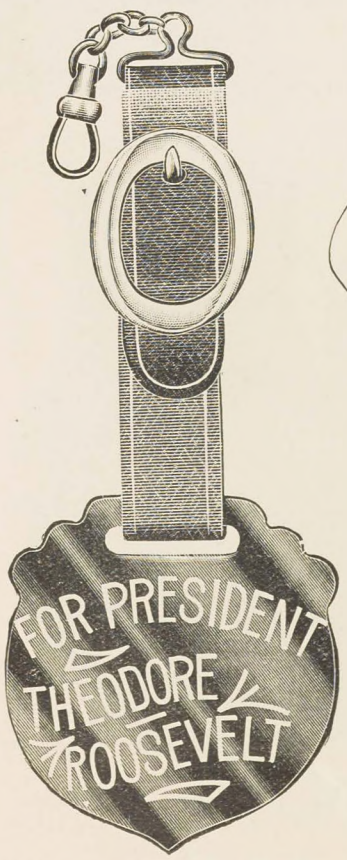
640 Broadway
Corner Bleecker Street
New York City

THE BAGGAGE CHECK CAMPAIGN FOB

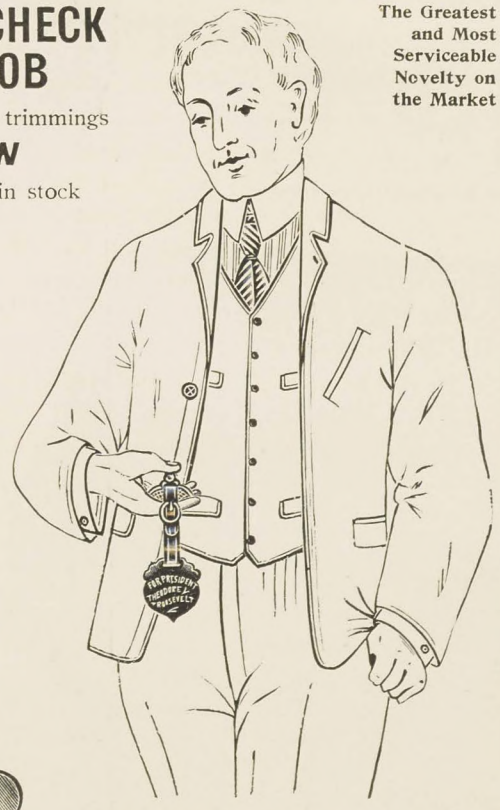
Made of genuine leather. Gilt trimmings

ORDER NOW

Names of both candidates in stock



The Greatest and Most Serviceable Novelty on the Market



Made of leather, assorted colors; gilt swivel and trimmings. Lacquered, untarnishable. An attractive, neat and substantial-looking fob. Length, 6½ inches. Inscription in black enamel.

E 500 Per dozen, net cash $1.90
E 501 Without toggle, as shown above, per dozen, net cash 1.60

A HAPPY HIT A GREAT SELLER

A. C. Becken, 156 Wabash Avenue Chicago

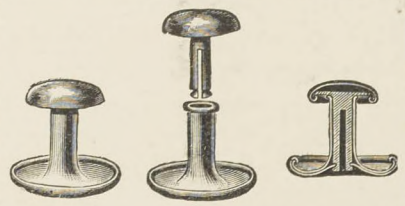
LOUIS GOTTHOLD

Maker of Fine

HAIR JEWELRY

2345 Eighth Avenue

Send for catalogue **NEW YORK**



Do you wear a turn-down collar? If so, try

The Improved Separable Collar Button

It keeps a man good-natured and saves his linen. In adjusting it you never muss the collar or break the button hole.

It's the Only. Try it

IMPROVED SEPARABLE STUDS are made on the same principle.

It pleases both man and woman.

Your jobber sells them. If not, write to us.

O. W. YOUNG & CO.
MANUFACTURERS
126 State Street, Chicago

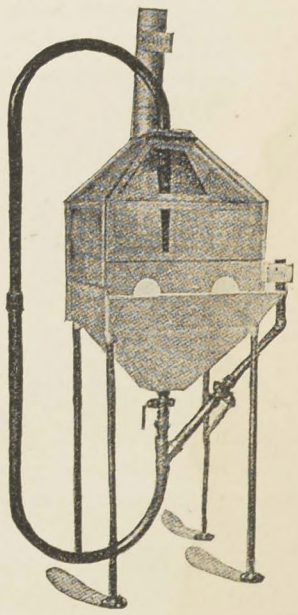
When writing to advertisers, kindly mention The Keystone

Manufacturers Attention

Try my improved

PATENT SAND BLAST

For Cleanliness, Perfect Work and Rapidity of Action, it is without equal



This invention, while new, has been readily accepted as a necessity by many leading manufacturing jewelers and silversmiths.

We will ship on 10 days' trial.

Write us and we will furnish you a list of manufacturers using our machine.

THEO. A. SIPPEL

205 McWhorter St., Newark, N. J.

The Election

A Non-Political Stump Speech to Jewelers

BY JOHN TWEEZER

If you will kindly come to order, and stop making faces at the fellow on the opposite side of the political fence for a brief ten minutes, I'll try to present the situation in the way it looks to a matter-of-fact old jeweler. Just forget, for a little while, that you are Republican, or Democrat, or Populist, or Socialist, or Prohibitionist, or ist of any kind; cut out politics entirely for the present, and remember only that you want to make progress in trade and add a little daily to your pile of ducats. Get outside of yourself for a brief interval and let the politicians go hang, while we talk things over in the same candid way in which we would discuss, say, the expediency of your making the cash discount or improving your advertising.

Both Candidates are Good Men

First, I want to call your attention to the fortunate fact that for the first time in some years *both* candidates represent the very best that their respective parties stand for. Each stands out above the average of the leading politicians in his party. Each has forced his party to do what its machine managers would not have done of their own motion. Each represents the highest type of American citizenship in integrity of character, culture of mind, cleanness of morals and faithfulness to the sense of duty. The theory of a democracy is triumphantly sustained when two such citizens are presented for the suffrages of the people; consequently, the best impulses and aspirations of the people find expression in our present political contest.

Political Hot Air

Don't be fooled by the hysterical shrieks of the professional politician and the professional critic. It is folly to argue that Mr. Parker's famous telegram was a trick, a part of a theatrical programme. It is not only silly—it is unjust and despicable. The sending of that telegram was the sincere act of an honest and courageous man. So, too, it is folly to heed the absurd howl against Mr. Roosevelt that he is "unsafe." If ever actions showed forth the quality of any man, his three years' administration has demonstrated that he can be safely trusted to undertake the most delicate and difficult tasks with a prudence as great as his energy—can be trusted *to do* things, mind you. Criticism of the President seems absolute folly, in view of the positive and brilliant achievements of his administration. Neither candidate exhibits that worst form of cowardice—the doing nothing when there is a risk in action. Mr. Parker's offense is an instinctive courage in making his convictions known; Mr. Roosevelt's offense is his instinctive activity when a public duty presents itself. The moral level of both these men is immeasureably higher than that of the angry critics on both sides the political fence. The election of either will insure safety to our institutions, to our national policies, to our political life and to our industrial activity; for though editors of political newspapers and red-faced orators may shriek the coming of a "crisis," in point of fact the two contending parties have now no issue of real importance between them, nor is there any question at stake which will seriously affect trade if the people votes its majority on the one side or on the other. (I include the tariff question, because there could be no action with a Senate opposed to the President).

No, there is no "crisis." In the history of Presidential elections there was probably never a time when trade—real business—had less ground for anxiety as to the outcome, whichever party won; never a time when the sane and level-headed citizen could go about his daily work with fewer fears and apprehensions for the morrow. The party "workers" will grow purple in the face, as the campaign progresses, but you and I may quietly smile—and turn to the job in hand. The country is safe.

The Jeweler, at this Time

It is your duty to vote: the duty is imposed by your citizenship. If you vote conscientiously you will vote right, however you vote.

And meanwhile? for Election Day is a month in the distance.

Well, meanwhile get all the good out of the discussion of party policies that you can. A national election campaign carries with it a great deal of really useful information. History will be making rapidly in the thirty days ahead. You can learn much of the workings of popular faith and belief, of the processes of legislation, of the relations of the co-ordinate parts of government, of the principles which underlie party policies, of the operations of sectional influence, by giving attentive ear to the arguments which will be uttered in behalf of this candidate or that. Read the editorials, listen to the speeches, look upon the fireworks; keep in the thick of the crowd; there's a freshening of your enthusiasms for American institutions in all of it. But, also—

Meanwhile, it will be good business for you to disinter the old patterns of silverware that have been entombed in your back wall case these past five years, carefully remove the mould from these ancients, arrange them on a table marked "Bargain Counter," and let your startled fellow citizens know that "no reasonable offer will be refused." It may go hard for you to take half cost for them, but fresh silver in the pocket is better than stale silver in the wall case, when new Christmas goods are waiting your considerate eye.

Meanwhile, it may be best that you "fire" that supercilious clerk and give the place to one better able to make friends and hold customers. The supercilious fellow may be more competent to hold down the Presidential chair than either Roosevelt or Parker (as he probably believes, in his inmost heart), and yet not size up to the requirements of a jewelry salesman.

Meanwhile, it will pay to improve your advertising. Presidents may come and go, but the store goes on forever; and you are not "in" for only a four-years' term. Don't put too much time to cleaning clocks and entertaining loafers. Hire a watchmaker and let your goods do the entertaining, while you get busy with a long pencil and a large pad of paper. And wear the pencil down, and destroy sheet after sheet of paper, until you can truly say, "*That* advertisement will sell goods."

Meanwhile, stop whining about dull trade and hard luck. Whatever comes to pass politically, *you* are still a candidate for public favor: make your election sure. Whatever happens in November, you will still have to hustle for business. Whether Roosevelt or Parker is elected, the sun will rise, the crops will grow, men will need watches and women will need adorning; things will happily break, dirt will judiciously settle itself into pivot-holes, and money will be found to pay the jeweler though half of all the politicians be confounded.

Meanwhile, let your sympathies broaden and your mind expand. Cultivate a mental charity. All Republicans are not thieves, all Democrats are not spineless negatives; there are real patriots among the Populists and a plenty of manly men will vote the Prohibition ticket. No one party possesses all the Christian virtues; none is hopelessly wicked. Ten years from to-day you will blush for your present opinions of contemporary public men; twenty years from to-day you will laugh at your own inconsistencies in your progressive beliefs. It is a very good world after all, and the good people in it far outnumber the bad; and whichever of two splendid Americans is elected President in November, this dear country of ours will go on in its prospering way and your children's children may thrill at the name of the candidate for whom you did *not* vote.

J. T.

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Reviews of Current Ophthalmological Literature of the World

The Relation Between the Ocular Muscles and Refraction

In a lengthy article in *The Archives of Ophthalmology* Dr. S. M. Payne, of New York City, gives his views about the relation between refraction and heterophoria. He does not believe that an individual muscle of the eye ever is weaker than another, except under causes which produce a real paralysis, and also denies that a muscle may be too short or have a wrong attachment. These statements undoubtedly are rather sweeping, for there are cases, as has been reported in these columns, in which one or more ocular muscles were not developed but only replaced by fibrous bands. There can be no doubt, therefore, that if there are cases of complete absence of an ocular muscle, there are also cases in which the muscular tissue is only partially developed. However such cases are probably very rare, and it is, furthermore, very likely that these muscles which were rather weak at birth do soon increase in strength under the influence of physiologic exercise in the act of vision.

The doctor does not believe in partial tenotomies as is shown by the following passage:

Partial Tenotomy When a partial tenotomy is performed, the muscle is usually re-attached to the same place, as the conjunctiva and Tenon's capsule, and the outer fibres of the muscle hold it in place. Several operations may be performed on one or both eyes, and no harm is done so long as the muscle is attached to its original insertion. If one succeeds in giving the correct glasses, the asthenopia is cured, and then both patient and doctor are convinced that if it were not for the tenotomies they would never have been relieved of the asthenopia. I have had patients come to me wearing glasses, with a tenotomy history, and still have asthenopia. A test of the muscles would convince me that no harm had come to the muscles, and by a careful correction of the refraction I would cure the asthenopia. When the muscle forms a new attachment, as the operator intends it, diplopia is the result, especially when looking in the direction of the cut muscle, and often in accommodation. In looking straight ahead diplopia may not exist, but the patient will have asthenopia from the extra effort of the cut muscle to hold the eye straight with the fellow eye, even though the error of refraction is absolutely corrected. These cases you cannot relieve until the cut muscle is advanced to its original attachment.

Dr. Payne also objects to the usual tenotomies for squint because, in his experience, most cases after a few years showed a deviation of the eyes in the opposite direction. He reports twelve cases to show that it is not necessary to cut a muscle, prescribe prisms or leave off convex spherical glasses for exophoria with hypermetropia. His views on these subjects are given in the following extracts from his paper:

Prisms When a prism is used to correct esophoria with hypermetropia, it causes a voluntary or primary contraction of the internus (to prevent diplopia), to overcome the amount of the prism, in addition to the involuntary or secondary contraction of the internus induced by accommodation. You will find the esophoria after a few days' wearing of the prism, about the same with the prisms on, showing that the internus does have an independent action, just as adduction, which can be cultivated to overcome 100° of prisms, shows an independent action, and has nothing to do with the action of the ciliary muscle. The reason exophoria with myopia increases with the wearing of prisms is that there is a voluntary contraction of the externi to overcome the prisms, which would cause a further relaxation of the interni, thus leaving the original amount of exophoria, due to the lack of stimulus to the interni. This can be corrected only by giving the myopic correction, by making the ciliary muscles act as in emmetropic eyes.

Exophoria with Hypermetropia There is a natural tendency to convergence to a point equal to the amount of the hypermetropia and when the person tries to read, the extra accommodation for the hypermetropia makes the eyes have a tendency to converge more than the point of fixation. This, in many cases, makes the letters broaden out or separate entirely into two sets of letters, which is cleared up by a voluntary contraction of the externi. This counteraction can be easily overdone and cause a tendency outwards. At the same time the ciliary muscles under such a great strain relax, and of course a relaxation of the interni results, thus throwing the eyes more under the control of the externi for the time. If we leave the convex glasses off, as Dr. Davis advises, we are no better off than when the glasses were first prescribed. The muscle cutter calls this a true exophoria, and the externus suffers the penalty for the inability of the ciliary muscle and the interni to hold up under such a load. If this extra accommodation is removed by the right convex glasses, it will remove the extra effort of convergence. The externi will not then be called into action. I have never treated these cases in any other way than to give them the proper glasses, and to my knowledge and belief I have never failed to give entire relief.

Esophoria with Myopia This condition (esophoria with myopia) is not very common, and then only in myopia, which is the same in both eyes. In myopia we have no accommodation, or less than the amount required to stimulate convergence to the point of accommodation. The interni take on an independent contraction to produce sufficient convergence to prevent crossed diplopia. A forced action of an individual muscle that is outside the laws of accommodation and associated movements of the eyes may produce heterophoria, and in the case of myopia may produce esophoria. Correct the myopia, force the eyes to accommodate as in emmetropic eyes, and the convergence we have then is produced by the action of the ciliary muscle, or the natural convergence.

Pseudo and True Heterophoria Dr. Savage and others call the heterophoria that can be corrected by glasses "pseudo," and that which cannot be corrected by glasses the "true." That is, the esophoria remaining after the hypermetropia is corrected, the exophoria remaining after the myopia is corrected, esophoria with myopia, and exophoria with hypermetropia they call the true heterophoria and should be treated by partial tenotomies.

I believe that the reason these cases are not all found to be "pseudo" is that the refraction work is faulty. I base this statement from a large percentage of my patients who have been under those who believe in true heterophoria. I take the history of the muscle-cutting and those who declined to have the muscle cut; I then measure the glasses they have with them which the doctor declares are right. I make my examination and the result shows as follows: They have given the manifest hypermetropia which may range from one-fourth to one-half the total. My examination with the ophthalmoscope will show very close to the total amount of hypermetropia. The twenty-foot test will show about the amount probably of the glasses they are wearing. This may not be more than twenty-five per cent. of the total, with esophoria probably less with the manifest correction. After increasing the glasses as much as possible with both eyes together, I then have them try to read Jaeger No. 1. If they cannot do this with the manifest, I increase the glasses until they can, and still increase as long as the eyes become more comfortable with each change, until I reach the limit of comfort. This is compared with my ophthalmoscopic examination. I then compromise by giving them the weakest glass with which they can read perfectly comfortably in order to give them the best vision possible for the distance. If it is necessary for them to wear the glasses all the time, it will not be long before they have normal vision for the distance. I often find it necessary to give them about the total correction before the eyes are comfortable for reading. This will in time become manifest for the distance.

I sometimes find that patients are wearing a different glass for each eye, when the hypermetropia is the same. My test for twenty feet, each eye separately, will show the same as the glasses they are wearing probably. The way I detect the fact that eyes have the same hypermetropia is to increase the weaker glass to the same as the stronger; the vision of both eyes will be improved for the distance and for the near; the eyes become, as they say, more steady and feel better. Eyes with glasses $\frac{1}{4}$ or $\frac{1}{2}$ D. difference usually see about the same, and sometimes less than each eye separately, and when the glasses are changed to the same, the vision usually improves one line or more. That is, if the vision is $\frac{20}{20}$ with different glasses, with the same glasses it is usually $\frac{20}{15}$, and often $\frac{20}{10}$. Another way I have of determining is this: If there is no vertical tendency to deviate, but only a horizontal tendency, I feel sure that the hypermetropia is the same. The accommodation is the same, notwithstanding that when one eye is under test the manifest may be more than when the fellow eye is under test. That is, the eye behind the blind has the same manifest as the eye under test.

The mistake made most often, I believe, in refraction, is to place a spherical lens over one eye and a cylinder over the other. This condition of refraction, in my opinion, does not exist. As the refraction in these cases is not so easily found, they get the "scissors" more than any others. A small amount of hypermetropia is rarely ever manifest with the astigmatic correction, while the vision is often improved with the spherical alone. After a spherical only is found for one eye and a cylinder for the other, place them in a frame, give the patient the use of both eyes, then place the same strength spherical behind the cylinder that we have in the fellow eye. The vision will be improved and the eyes will be more steady and comfortable.

Hypermetropia may be different in the two eyes when no astigmatism exists. When astigmatism exists in one or both eyes, the hypermetropia is the same in both eyes, if any exists. My explanation is this: Eyes having the same amount of hypermetropia, astigmatism may develop, which would be the same in both eyes. Eyes having a difference in the amount of hypermetropia, the difference is formed into astigmatism. If there is any further development of astigmatism, it is the

(*Continued on page* 1661)

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(*Continued from page* 1659)

same in both eyes, leaving the hypermetropia, should there be any remaining, the same in both eyes.

Instead of all the hypermetropia developing into hypermetropic astigmatism, it may develop into myopia. In this case one eye may become more myopic than the other. The one that becomes more myopic is the one with the greater amount of astigmatism. This is due to the better eye fixing, while the eye of the poorer vision is discarded in accommodation and turns outwards. In the majority of myopic eyes the myopia is different whether astigmatism exists or not.

Myopia due to Overuse of the Eyes

I believe the starting point of myopia due to overuse of the eye is excessive convergence in hypermetropia, first causing a tendency to divergence at the near point and then myopia. I base this belief on the history of cases who have been wearing an undercorrection for one or both eyes. These cases invariably become more near-sighted. As they usually have exophoria, it is partially corrected by the partial correction of the myopia. This remaining exophoria causes an increase in the myopia When the myopia is fully corrected it very rarely increases, as the exophoria disappears with the full correction. Some who inherit myopia will become myopic in spite of full correction. Excluding the inherited cases, I have seen less than a half dozen who wore the full correction become more myopic. Many patients have come under my observation who had been wearing an undercorrection for both far and near, or full correction for the distance and undercorrection for the near, a great many of them wearing the same strength glass for both eyes, when one eye was too near-sighted to be considered of any value, and sometimes a plane glass over the more near-sighted eye. All of these cases showed an increase of myopia. This looks as if the exophoria remaining with the partial correction caused the increase in the myopia, and that the starting point of myopia is the exophoria with hypermetropia.

I have seen the externus of a high myopic eye cut and a plane glass ordered for that eye. I have in mind a case where a muscle had been cut three times, and still the eye turned outwards. The patient had never worn a correcting glass for this eye. Examination showed: R. V., with — 4 D. $= \frac{20}{15}$; L. V., with — .50 D. $= \frac{20}{15}$; cyl. axis 165°. With this combination the eyes were absolutely straight.

When one eye is more near-sighted than the other, they focus at different points. If an object is brought up to the far point of the better eye, it is less indistinct with the other eye, and begins to disturb the vision of the better eye by a blurred object larger than the one seen with the better eye. If it is necessary for the better eye to accommodate up to the reading point from its far point, the reading becomes still more distinct with the more near-sighted eye, and when the far point of the more near-sighted eye is reached the better eye is discarded. In any case one eye is discarded and moves out to prevent double vision. Muscle cutting will never prevent this disturbance at the reading distance. The only remedy is to make the image the same size on the retina with glasses.

Physiological Action of the Ocular Muscles

In accommodation all the muscles supplied by the third nerve are brought into action, with a relaxation of the muscles supplied by the fourth and sixth nerves, the superior oblique and externi. In reading or looking at anything held in the hand, the natural position of the eyes is inwards and downwards, as the hands are not raised above the horizontal plane of the shoulders. At arm's length the angle below the horizontal plane of the eye is about 30′. At the ordinary reading distance the angle is about 45′ below the horizontal plane of the eyes. As this is the most common position of the eyes in accommodation, the inferior recti are larger, and consequently stronger than the superior recti. If they were, however, of the same strength and contracting equally at the same time, the inferior recti would control the eyes, as they are attached nearer the corner, which gives a greater leverage. This is where nature demands and nature supplies.

Esophoria

In hypermetropia the same in both eyes, the tendency to converge is equal to the amount of accommodation, and also to turn downward in the same ratio below the horizontal plane of the eyes, the eyes remaining in the same plane downward as the accommodation is the same. As I have before explained, if the hypermetropia and accommodation to the reading point are too much to be overcome by the ciliary muscles and the muscles of convergence, the result would be exophoria. In either esophoria or exophoria the eyes would keep in the same plane.

Hypo-Esophoria

Eyes differing in hypermetropia would vary from the same plane both horizontally and vertically —that is, the eye having the greater amount of hypermetropia would have a tendency to turn inwards more and proportionally downwards more. The exception to this rule is when the more hypermetropic eye accommodates only the same amount as the fellow eye, at the expense of distinct vision for the former eye.

Changes which the Crystalline Lens Undergoes in Accommodation

A few months ago, in the Colorado Ophthalmological Society, Dr. Edw. Jackson read a paper on the changes which are observed in the crystalline lens during accommodation. We give here an extract as found in the *Ophthalmic Record* without further comment, and will only remind our readers that we gave the latest views of Tscherning on the mechanism of accommodation in the August number of THE KEYSTONE. There we showed that the latest theory of Tscherning appears to be well in harmony with the latest observations of Hess and Heine, the ardent defenders of the Helmholtzian theory of accommodation:

Dr. Edward Jackson referred to the theory of Helmholtz, who believed that tension was removed from the suspensory ligament in the act of accommodating, and that the lens then became more globular in form, the bulging of the anterior surface being the greater. Tscherning, in brief, believes that greater tension is made on the capsule, which causes the lens to become flattened at the periphery though conical, somewhat of the shape of the lenticonus at the center, and that with Helmholtz the posterior surface of the lens does not change much in its contour.

Howard Grossman* reported observations on the shape of the crystalline lens in accommodation, observations having been made on a case of aniridia having considerable accommodation power for such cases. Very small areas of anterior and posterior polar cataract were present, which gave excellent points to watch the movements of the lens surface when in action. Grossman believed from these observations that there was a bulging of both the anterior and posterior surfaces of the lens, as well as a flattening at the periphery.

Hess has demonstrated almost absolutely that the zonules are relaxed in the accommodative act, being more marked under eserin and more fixed under atropine.

Priestly Smith has shown that the lens structure is such that the resistance in it is different, for different thicknesses.

Dr. Jackson has observed that in making the *shadow test* on the majority of individuals with a large pupil of 6 or 7 mm. in diameter, which can be found in young subjects, at one-third of a meter distance with a small point of light, 2 to 3 mm. in diameter, you can watch the lens contour by shadow, then, when the patient accommodates for a point 31 cm. from his eye, you will get reversal of light at the center of the lens which does not occur at the periphery. Observations made with patient accommodating at a still closer point show that as accommodation increases the refraction at the edge of the pupil increases, indicating that, though the convexity at the center of the lens increases, it does so faster than that at the periphery, though this increased convexity is observable in all areas.

Dr. Jackson's observations lead him to conclude that there is a distinction between an absolute flattening of the periphery of the lens and a relative flattening. He agrees largely with Helmholtz's theory.

Dr. Jackson's observations in one case of aniridia proved that the lens in such individuals did not act under the same conditions as the normal eye, which must be taken into account in considering Grossman's observations.

* Trans. British Med. Association, 1903.

An Interesting Observation of the Fundus of the Eye During a Transient Blindness for Ten Minutes

We all know that the eye gets blind from undue pressure of the eyeball, at least as long as the pressure lasts, and that this is caused by insufficient blood supply through the compressed vessels. That such temporary interference with the circulation sometimes occurs in the eye from internal causes is also a well-known fact, but it is seldom that one may observe such stoppage of the circulation and its return during its entire course. Such case has been reported lately by Dr. T. H. Jamieson, of Wellington, Kans. His patient was a laborer, aged eighty-four, who came for repeated short spells of blindness in the right eye One day the patient reported that he had no attack for the last two days, and it was while the doctor, as a matter of routine, looked into his eye that he observed a phenomenon which he describes as follows:

While viewing the fundus in search of cause, was surprised to see the central artery of retina fade into a mere white line, followed closely by fading of vein and its branches until could not even make out their position. Optic disk became pale and white, retina pale, but through it could be made out the chorioidal vessels radiating in all directions from outer border of optic disk. In probably two minutes' time the central artery became visible, followed by filling of vein and normal condition of fundus of eye. When artery began to fade patient remarked that objects were getting dark before the right eye, and when vein had faded from vision said he could see nothing with right eye. Had him close the left eye, and he said he could not see the light reflected into right eye.

A Criticism of Mr. Worth's Opinion of Muscle Training

Not long ago in the *Ophthalmic Record* Dr. David W. Wells, of Boston, Mass., criticized a few statements which Dr. Worth made in his excellent book on "Squint." The criticism is directed mainly against the following passages, "Rhythmic exercises with prisms, cylinders, etc., are much employed in America in cases of heterophoria. I have tried them repeatedly, but have never seen the slightest benefit from them." Page 198: "If a patient has orthophoria in distant vision and exophoria in near, or if there is more exophoria or less esophoria in near than in distant vision, he has insufficiency of dynamic convergence. In an uncomplicated case of insufficiency of convergence exercises should be tried."

"The following simple plan is as good as any: The patient begins reading a book at the ordinary distance; then, while still

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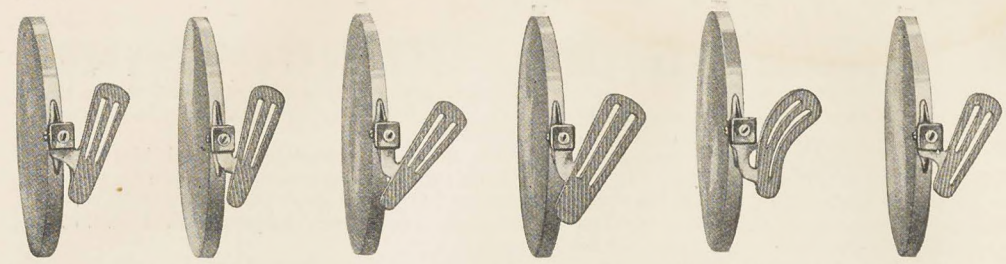

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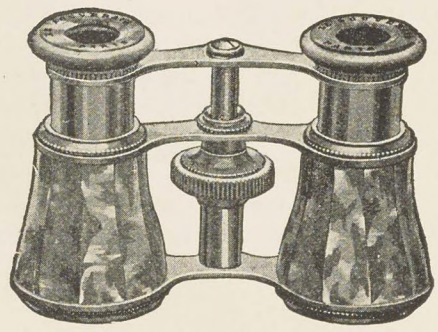

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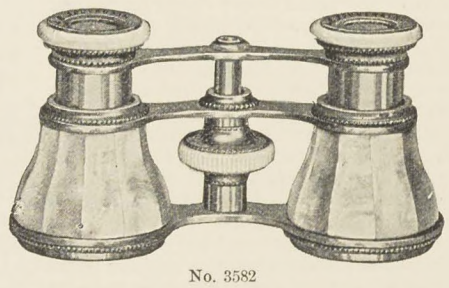

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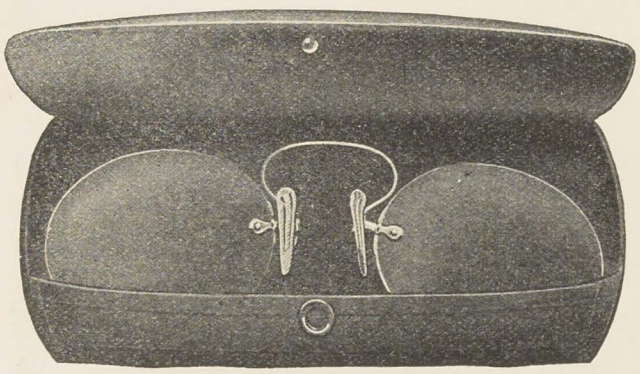

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(*Continued from page* 1661)

reading, he gradually brings the book nearer his eyes until the print begins to be blurred. He then slowly removes the book to the ordinary reading distance. This is repeated; at about every tenth line he looks into the distance for a moment in order to completely relax his convergence. Two or three pages should be read in this way twice a day, for two or three weeks. These rhythmic exercises, of course, do not increase the power of the ocular muscles (any more than voice training increases the laryngeal muscles), so they do not in the least diminish the exophoria in distant vision. But they often much improve the power of dynamic convergence by teaching the nervous apparatus to respond more readily to the will."

Dr. Wells argues as follows:

This plan violates the two principles on which success depends. The patient "brings the book nearer to his eyes until the print begins to be blurred." What better method could be adopted to invite a suppression of one eye? The ciliary is being strained to its utmost, in most cases probably much more than the convergence. This is more faulty than Gould's plan of putting prisms base out before the patient, through which he fixed a candle at close range. This is carried off, or the patient backs away, until diplopia results. Both these plans secure convergence through association with accommodation. In the condition cited it is the convergence, not the accommodation, which is weak.

When the co-ordinated impulse to converge and accommodate is given, the converging muscles do not easily turn the eyes until the visual axes meet at the distance for which each eye is focused. The logical correction is to disassociate these two functions to put the accommodation at rest—either by fixing a distant object or with convex lenses equal to the distance fixed, e. g., + 10 in the phoro-optometer stereoscope, in which the card is at 10 c. m. distance. This done, the internal recti should be exercised with prisms, care being taken that the patient does not allow one eye to diverge, the image being suppressed and diplopia not noticed. This possibility is absolutely guarded against, and the prismatic element easily varied by using the phoro-optometer stereoscope, with its two cretês prisms. Charts should be used in which the fused image is a composite picture, so that the suppression of either eye is at once apparent. The decentering of the two + 10 lenses is a very subtle means of securing a prismatic effect of about 1° for each mm. decentration.

The loose prism method should be used just as soon as the patient can be trusted not to suppress one eye. The stereoscope is his teacher, with whose help he may fuse five times as much as without, and of this help he should learn to be independent.

The amount of the heterophoria is recorded both before and after each treatment and, unless a decided difference is shown, exercises are discontinued. While it is true that we frequently develop a good and sufficient adducting power without reducing the exophoria at a distance, yet in looking over my records I find a great many cases of absolute cure of distant exophoria. This is not only with medium degrees, but cases showing 15° to 20° distant exophoria have been transformed into orthophoria, or even slight esophoria. We are "using rhythmic exercises in America" because we are getting results. Is it not quite possible that Mr. Worth's failure may be due to his evidently faulty methods? It seems unaccountable that one who has announced so strenuously that "the one essential cause of squint is a defective development of the fusion faculty" should absolutely ignore the same causative factor in heterophoria as in heterotropia.

Although the reviewer agrees with Dr. Wells, when he criticises the special method recommended by Dr. Worth to improve the power of dynamic convergence, he believes that the same method, applied a little differently, will give as excellent results generally as it has in his own experience. This simple test is performed as follows: Take a clean piece of paper like the back of a visiting card and draw on it with ink a sharply defined black line. Bring this line gradually nearer to the patient and tell him to look at it attentively all the time while the card is finally brought up to the nose of the patient. He is told to let you know as soon as he sees two lines instead of one only. Should the patient suppress one image the observer will see that at once if he sits opposite the patient and watches the movements of his eyes. In a short while the patient will see the double images for himself as soon as his eyes do not converge any more on the line. This he will do the more readily, as there is nothing else on the card which might cover the faint double image as must be the case on a page full of words. If the patient uses this card properly, that is, bringing it rather quickly forward to his nose as far as it will appear single, and then withdrawing it again, and if he repeats it rhythmically for about a minute at a time he will soon be able to bring the card up to the nose while both eyes are converging on the line.

Optical Delusions of the Heavens

It is a matter of common observation that the sun, the moon and the stars appear much larger when they are close to the horizon than when they are high in the sky. Numerous explanations have been proposed to account for this, and here is another that recently appeared in the *Archiv. fur die gesammte Physiologie* from the pen of Robert Mayr:

"When we observe objects at a distance we are not conscious of the smallness of the angle under which we see them, and we think them much higher than they really are. This fact also explains the disillusions in photography, a country the boundaries of which are very hilly appearing almost flat on the sensitive plate, the lens giving us the real angular sizes of the distant objects without taking into account the psychic exaggeration of our eye. If, however, we look at distant objects under unusual conditions, our judgment is at fault, the smallness of the angle of observation becomes sensible and the objects appear much smaller. This is what occurs, for example, when a country is examined with the head bent to one side, the colors becoming much clearer, but the country appearing flat like a picture.

"We may apply these facts to the sun and moon. When we see these bodies at the horizon we place them instinctively at a given distance, and we judge of their size as we do of objects placed at this distance, that is, in exaggerating that size. When, however, these bodies are raised above the horizon, we see them under unaccustomed conditions without indicating comparative marks and at an undefined distance. In consequence of this fact, the exaggeration of our calculation disappears and the stars, sun and moon appear smaller to us.

"The angle under which we see the sun and moon is equal to about one-half of a degree. Calculation shows that this is the angle under which we see a tower forty-four meters in height at a distance of a little over three miles. Thus by comparison with known terrestrial objects, the stars at the horizon appear very large to us. The error depends in part also on the state of the atmosphere. When the atmosphere is not clear and is foggy, the error is greatest, in this case the moon taking on a red tinge; whereas when this body has all of its brightness it differs too much from ordinary objects for the instinctive comparison to be made, the moon in this case appearing smaller. The same reasoning applies to the sun. In foggy weather the stars also appear nearer, a fact which is due to their red color; the red requiring a greater effort of accommodation to unite on the retina the slightly refrangible radiations.

"It is not necessary that there be terrestrial objects to which we can directly compare the apparent diameter of the sun and moon; the error may occur at the horizon of the sea. It is to be noted that the constellations have the same apparent increase in size in approaching the horizon, and that often two lower parts of the rainbow seem enlarged. In short, we have to do with a very general phenomenon, applying as well to terrestrial as to celestial objects; in every case the error consisting in an exaggerated estimation of the objects on the horizon."

New York City Optical Society

The executive committee of the above society held a special meeting on August 31st, at which plans for the coming winter season were discussed. Regarding the place of meeting for next season, it was decided that each member should constitute himself a committee of investigation, with the object of securing suitable quarters and a desirable location. The scheme of scientific work prosecuted last season will again be carried out as follows: at each meeting there will be a lecture on some practical, scientific topic, this to be followed by a general discussion. Next the question box will be opened and all questions therein thoroughly discussed. In addition to this, it is proposed that at each meeting there be a clinic, in which the various members of the society will show their colleagues their technique in the practice of optometry. Members who are willing to take part in this portion of the programme are expected to notify the president, who will appoint them in the order of the receipt of names.

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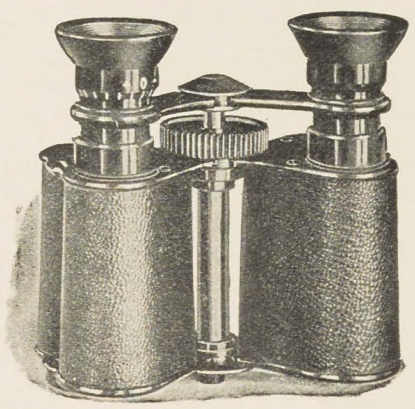

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Clinics in Optometry

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[Each of these clinics is complete in itself, and one of them is published each month in this department. They cover all manner of eye defects, from the simplest to the most complicated, and give the most authoritative procedure in the diagnosis and correction of the various visual defects. In order to make these clinics of maximum benefit, we invite our readers to join in them by sending us any criticisms or suggestions they may have to make in regard to the treatment here given. The first clinic of the series appeared in the May, 1904, issue.—ED.]

A Case of Toxic Amblyopia from Alcohol and Tobacco

The case we now present for your consideration is a man, 51 years of age, a quarryman by occupation. He was sent to us by a most capable refractionist to whom he applied for glasses, and who realized at once that the case was out of the ordinary, and that glasses were of doubtful benefit in the present condition of his eyes.

The patient tells us that his eyes feel heavy, that his vision has been failing for some time, and that for the past four weeks he has been unable to read, without glasses or with them.

We ask the man to look at the test card hanging across the room, and we find the acuteness of vision of the right eye is $\frac{20}{100}$, while with the left eye he is unable to decipher even the largest letter at the top of the card.

In order to determine whether this impairment of vision is due to ametropia, or whether it depends upon a condition of disease, we will make use of the pin-hole disk. It has the effect of reducing the circles of diffusion formed upon the retina, and thus makes the outlines of objects much clearer.

On account of the smallness of the opening, it diminishes the illumination, but this loss of light is more than compensated for by the greater clearness of form that is attained.

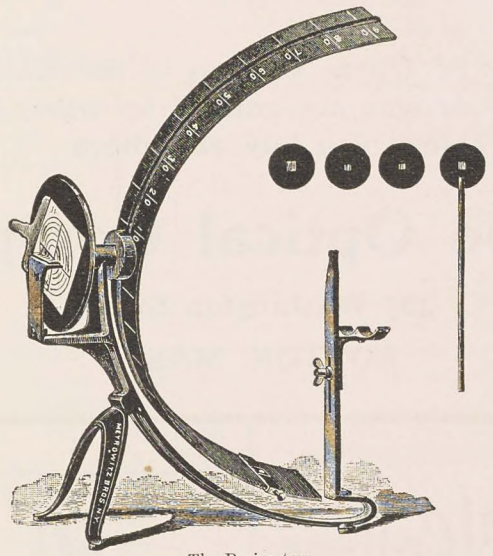
If the vision is susceptible of improvement by this test, glasses will be of benefit. If the vision cannot be improved by the pin-hole, glasses are useless. This test is one that can always be depended upon.

By cutting off all the marginal rays and allowing only a few of the more central rays to fall upon the retina, the eye is rendered independent of its refracting media, in fact their function is destroyed, and the image is formed solely by the few central rays that pass through the small opening. The image thus being made perfect; if now the vision still continues impaired, it must be because the retina is not capable of receiving, or the optic nerve of transmitting, this image.

Any capable refractionist can demonstrate this for himself. Take any kind or power of lens from your test case, convex or concave, weak or strong, sphere or cylinder, hold it close to your eye and look through it at the test letters; vision will be made more or less indistinct according to the strength and character of the lens, but no matter how greatly the letters are blurred or even if blotted out of sight, when the pin-hole disk is placed over it, the power of the lens is destroyed, and the letters are as clearly seen as with the emmetropic eye.

We will now see what the results of this test are: vision of right eye is little if any improved. Vision of left eye is raised to $\frac{20}{80}$ with some difficulty. This proves that the impairment of vision in R. E. is not susceptible of any improvement by lenses, while L. E. is only partially so. This is a very great diminution in vision and would also indicate his inability to read fine print. We give him the test card in his hand, and as we expected, he says he is unable to read any of the paragraphs. As a matter of routine, we try successively + 1, + 2, + 3, + 4 and + 5, but with none of them is he able to read anything except the larger sized print at the bottom of the card.

We will take this man into our dark room and make an ophthalmoscopic examination. The reflex is clear and bright proving that there are no opacities in any of the refracting media. The optic disk looks a little paler than normal with perhaps a bluish or greenish tinge, otherwise no evidence of the presence of disease.



The Perimeter

We will question this man as to his personal habits. "Do you drink or smoke?" "Yes, sir." "Now tell us the truth, how much do you drink? Tell these gentlemen just what your habits are in this direction." "Every evening on my way home from work I stop in the saloon and take a drink of whiskey and wash it down with a mug of beer. I spend Saturday evening there when I take from three to four to half-a-dozen drinks."

"As this is a matter of importance to your welfare, you must not conceal anything, and I am glad you have given us such a frank answer. Now how about tobacco?"

"I smoke both cigars and a pipe, and am seldom without one or the other in my mouth."

The very candid statement of this patient clears up the case, and I think we can unhesitatingly diagnose this condition as one of toxic amblyopia due to the excessive use of alcohol and tobacco; and as you are likely to meet with similar cases in your future practice, we will direct this patient to be seated while we give a few moments' time to the consideration of this condition.

Tobacco and alcohol cause disturbances of vision with nearly identical symptoms. Either one may produce the disease, but usually both are combined in the same case. It seldom occurs in young persons, the patients usually being over 40 years and with impaired nutrition. We find it more among the poorer classes because poor whiskey contains more fusel oil and cheap tobacco more nicotine.

While the ophthalmoscope gives no certain evidence as to the presence of the disease in its early stages, yet as a rule it is not difficult of diagnosis, because of the pronounced subjective symptoms.

A failure of vision is noticed, most marked in the center of the field. Usually both eyes are affected, but not always to the same extent. The patient sees nothing directly in the line of vision, but objects on either side are seen with more or less distinctness. This interferes with reading and writing, although if the scotoma is not large while the middle of the sentence is lost, the two ends of the line may be seen imperfectly. Patients usually complain more of disturbance of vision when in a bright light. Vision for color also fails in this central scotoma, the perception of red and green being lost.

As we look at our patient he has the appearance of a naturally healthy man, but no one can drink beer and whiskey as he does and continue it with impunity. Some men may drink more, and because they have not yet lost their sight or ruined their stomach, they think they are all right. Some men may go through a battle without being shot, and yet no one will argue that war is a safe occupation. So any man that uses alcohol and tobacco to excess is in danger that, sooner or later, some organ will give out.

Is there a scotoma in this case? In order to determine this point we will send for a perimeter and make the test before you. We will use a piece of red card, and we find as it approaches the center of the field, it disappears, and be it remembered this is one of the diagnostic points of a toxic amblyopia, the scotoma for red in the center of the field. We may remark in passing that as the patient begins to recover and the scotoma becomes less noticeable, the patient first sees red as pink, and gradually as improvement continues it becomes redder and darker.

We are sometimes asked by students about to enter on practice, whether a perimeter should be included in their outfit, and we usually answer that we do not consider it necessary, adding a few words of explanation as to the specific uses of the instrument. It consists essentially of an arc, as you see, which can be moved to any position in order to measure any desired meridian, and a small white test object moved in from its outer end until it becomes visible. As this is repeated at a number of different points, say 15° or 20° apart, until the circle is completed, the outlines of the field are indicated. The test object is also moved inward to the center along the different meridians and in this way the presence of any scotomata are detected, and their size and location mapped out.

The province of the perimeter then is to measure the field of vision and to detect the existence of a scotoma, all of which is included in indirect vision. It has little to do with direct vision, the vision of the yellow spot in which you are particularly interested in fitting glasses, and therefore it is only in exceptional cases that you will even think of it.

If you consider in any case it is desirable to obtain some idea of the extent of the field

(*Continued on page* 1667)

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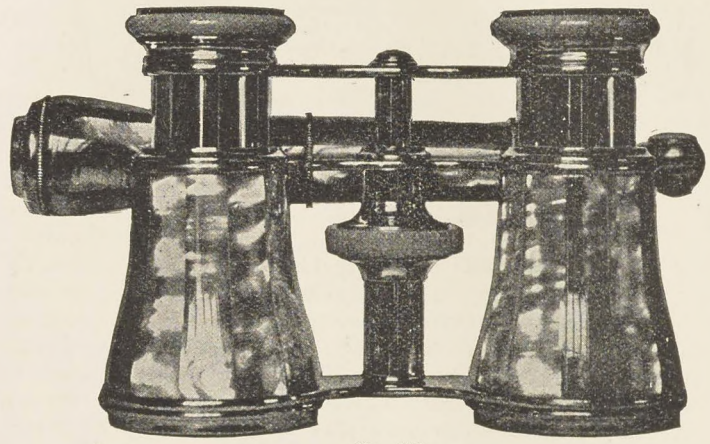

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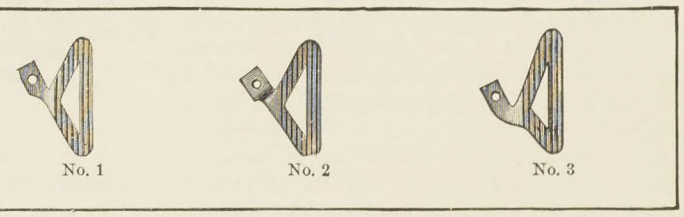

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Amplitude of Accommodation

ED. KEYSTONE:—The "Optician's Manual," Vol. I, page 290, seems to be somewhat contradictory in reference to amplitude and range of accommodation. It says: "The nearest point at which reading can be distinguished is the near point. The greatest distance at which same type can be distinguished is the far point. The distance between the near and the far point is the range of accommodation."

It seems evident to me that the size of type would offset the near point as well as the far point. To illustrate: I am 39 years old and can see Jaeger No. 1 type at 6 inches and at 31 inches. I can see No. 2 type at 5½ inches and 41 inches. I can see No. 3 type at 5 inches and 50 inches. In each case the amplitude as well as range of accommodation varies from all the others.

I presume that from what is stated at foot of page referred to, that No. 1 type is the one to use in tests. This being the case an emmetropic eye that can see No. 1 type at 8 inches, as near point, would have 5 D. of accommodation, the near point receding as accommodation lessened. When the eye possessed only 1° of accommodation the No. 1 type should be visible at 40 inches as near point. Hence every person under 40 years old, with emmetropic eyes, should be able to read Jaeger No. 1 type at 40 inches. This, it seems, would serve equally as well for a distance test as the 15 or 20 feet Snellen's type would at 15 or 20 feet.

This does not seem to work out in practice. My vision is $\frac{20}{20}$, almost $\frac{20}{15}$, but as before stated, I cannot see No. 1 type at more than 31 inches. What is my near point? Is it 6, 5½ or 5 inches? What is my range of accommodation? Is it 25, 35 or 45 inches?

Is Jaeger No. 1 type constructed on same visual angle for 40 inches that Snellen's type is for 15, 20, 30, 40 feet, etc.? If so, why this seeming discrepancy?

Yours truly,

"INVESTIGATOR."

[The size of the type is an important matter in determining the amplitude of accommodation. The larger the type the greater the apparent amplitude. For greater accuracy the smaller type is preferred, Jaeger No. 1. We would say our correspondent's near point is 6 inches, and his amplitude of accommodation 6.50 D.

The Jaeger type is not constructed on the same principle as Snellen's, and therefore, it is not possible for any eye to read the Jaeger No. 1 type at 40 inches, no matter how little or how much accommodation they may have, because the distance is too great and the type is too small.

Objection has been made to the use of type like Jaeger's to measure the accommodation, for the reason that persons who are accustomed to reading are able to guess at the words by their general appearance and by their relations to neighboring words, while those who are unaccustomed to reading must study the words one by one. We think this fact accounts for our correspondent's near point of 6 inches. At his age, with a visual acuity of $\frac{20}{20}$, the near point is normally at 8 or 9 inches, but as he is probably familiar with the type he is able to bring it closer and thus give him apparently a greater amplitude than he really possesses.

In order to meet this objection, a set of test types has been devised, composed of isolated letters of such sizes as to conform to the minimum visual angle principle of Snellen; but they have not displaced Jaeger's types, which serve every practical purpose.—ED.]

An Exhortation from President Holmes

The new president of the American Association of Opticians wishes to make his little bow, express his sincere thanks for the honor conferred on him and to say a few things about the future of the association.

If any good is accomplished it must be by organization, and now that many of the State societies have affiliated with the American Association of Opticians, we have the nucleus for an ideal organization.

The Milwaukee convention reduced the per capita tax for State societies to fifty cents. This means that each member of these societies will have to pay only fifty cents more to his society than heretofore.

It is difficult to see how any member could object to this. He certainly would not object if he could be present at one of the meetings of the association.

Every paper or lecture given at the Milwaukee convention contained something new, something a little different, something to think about and to apply to your every-day practice.

You don't get all there is in a paper or lecture when you read it set up in cold type. When you have it from the author's lips it is a different story. Then you can have a few words with the author in the smoking room or the lobby.

In a moment he can straighten out some tangled subject that has always been a mystery to you.

Every State in the Union should affiliate this year and should send delegates to the Minneapolis convention, where they will positively be accorded the proper recognition. Every member should attend. It has been hinted that the Milwaukee convention was not a success. It was far from a failure.

There were enough railroad certificates turned in to secure the one-third rate on return trip, and many came on mileage, passes, etc.

Those who attended went home enlightened and enthused. They will do better work this year than if they had not attended.

What the new president wants is ideas, thoughts, suggestions as to a policy for the coming year that will bring every State society within the fold and make the next meeting a genuine success.

Write to the president and help him. Don't find fault; he can do that himself, and besides there will be plenty of others to do it.

Don't be a "stay-at-home." You are sure to get into ruts and you might get to be one of the fault-finding kind who never do things themselves and are never satisfied with the things others do for them.

Don't say you are too busy to attend the convention. It is usually the men who are doing the most prosperous business who do attend.

Some men can be busier with two or three two-dollar cases and a soldering job than others would be with a business of a hundred dollars a day.

You surely are no busier than the successful M. D. who feels that he must attend his convention or get behind the times.

Yours for success to the A. A. O.,

HARRY P. HOLMES, President.

Clinics in Optometry

(*Continued from page 1665*)

of vision, it can be determined on the blackboard or any plane surface. A mark is made for the sight to be fixed upon, and a piece of chalk is moved inwards from the extreme limits of the board up to the center. The marks made where it first appears indicate the limits of the field. If it should disappear and reappear, a scotoma would be shown to exist.

Now, it is safe to say the diagnosis has been fairly made out. The patient can not see well, his vision does not respond to the pin-hole nor to any lenses we place before his eyes, proving that it is not an error of refraction; there is no opacity or any disease of the retina; there is the scotoma for red in the center of the field; he is an inordinate user of alcohol and tobacco.

The first step in the treatment is the removal of the cause, and if this man wants to regain his sight, he must abstain from drinking and smoking. In addition we will prescribe strychnia internally, galvanism locally, and a good nourishing diet.

To the patient, "My man, for the sake of your sight and for the benefit of your family that depends upon you, you must cut out your beer, whiskey and tobacco. If you will faithfully follow our directions, I think I can safely promise that you will get well. Come back in a week and report."

Note that in this case the prognosis is good, and so it is in any case of toxic amblyopia if patient is seen early and if he will abstain entirely from the poisonous agents. He may even get well if he is willing only to reduce their quantity, but this is not at all certain. Persistence in their use is sure to lead to greater impairment of vision or even practical blindness. After complete recovery, the disease may sometimes recur if the appetite for drinking and smoking is uncurbed.

While it scarcely comes within your province to prescribe the administration of a nerve tonic or the application of electricity, yet I think it is your duty as educated optometrists to be able recognize the existence of this condition, and it will also add greatly to your prestige. Make your examination along the lines I have mentioned, and refer your patient to a medical man for treatment. In this way you establish a reputation for competency with the patient and his physician, and you gain the good will and confidence of both.

Three weeks later we have before us this same patient but a great change has taken place. He has called each week since then, always reporting improvement. He says his eyes have lost that heavy feeling and that they feel good. We test his vision on the card and find that with +1.50 the acuity equals $\frac{15}{20}$. He says in answer to our question that he has not drank any whiskey or beer, but that he has smoked an occasional cigar. This is a very satisfactory improvement and the indications point to complete recovery. We will advise him that his welfare demands continued abstinence, and that he should still keep on with the medicine and the galvanism for some weeks longer.

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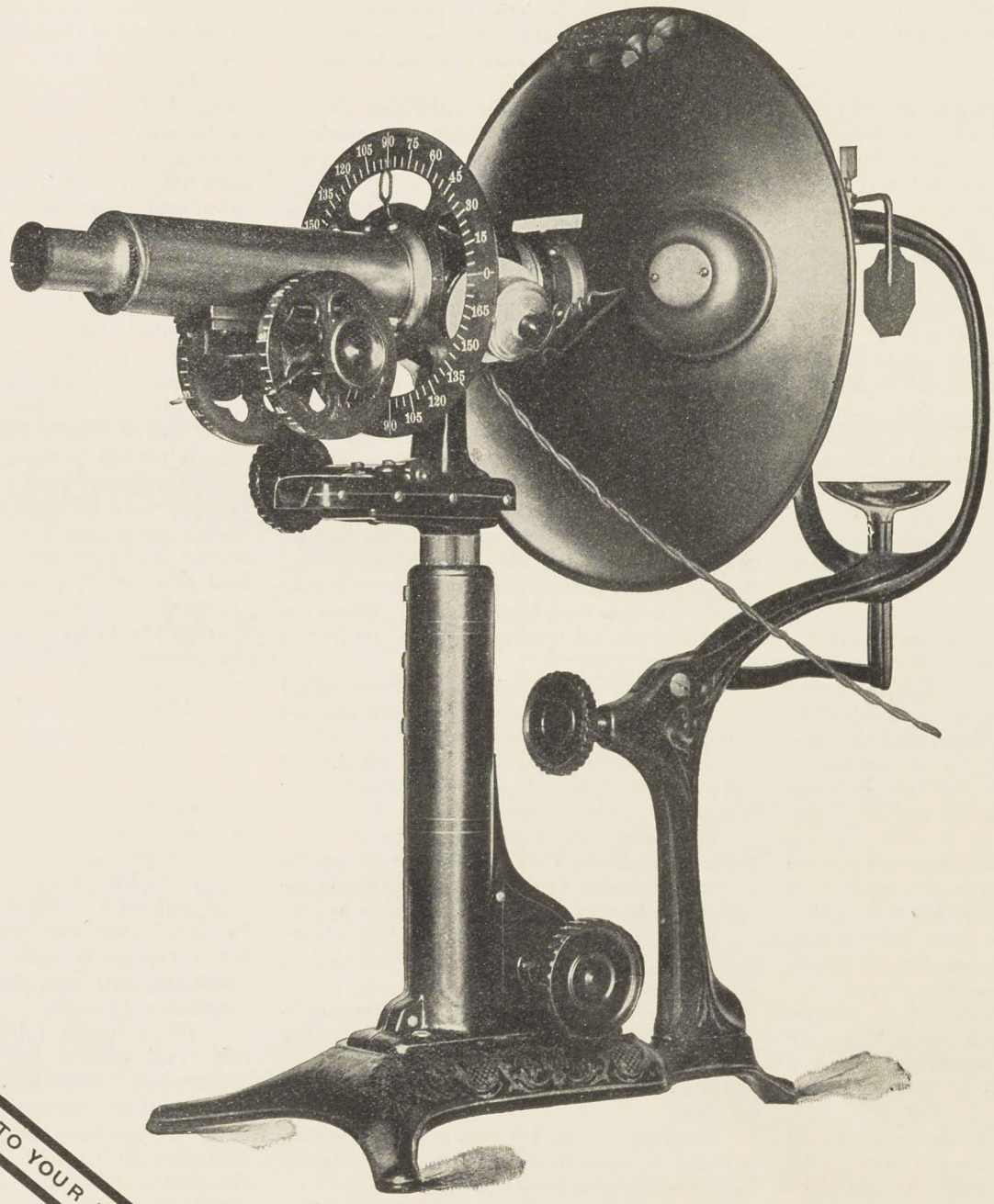

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Optical Questions *and* Answers

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To enable us to answer questions satisfactorily and give proper advice in the management of cases submitted to us, it is essential that we be furnished with a complete history of each case and accurate information on the following points:

1. Age. (If not possible to give exact age, always approximate).
2. Have glasses been previously worn? How long and what number?
3. Visual acuteness of each eye, and what improvement glasses afford.
4. Range of accommodation (without glasses and with them).
5. Evidence of astigmatism (as shown by radiating lines).
6. Test for muscular insufficiency.

"J. H. D."—Woman about forty-six years old. V. O. U. $\frac{20}{100}$. V. R. E. no letters. V. L. E. $\frac{20}{100}$. Never wore glasses. Examination by retinoscope shows R. E. 7.50 D. hypermetropia. L. E. 7 D. hypermetropia. Will not accept more than + 3, with which she sees $\frac{20}{40}$. Had given her + 3 in the hope that the strength could be increased from time to time, but she returned in two weeks stating that they made her dizzy, also complains that at times there is a mist before the eyes and all objects look blurred and indistinct. Examination with ophthalmoscope shows lens and humors to be clear, but the retinal vessels look thin; in fact, scarcely visible, and the entire retina has a pale appearance. The great trouble is, that this woman has gone all these years without glasses and, furthermore, she is at present undergoing the change of life. Would it not be advisable to refer this case to an oculist?

In a case of defective vision the use of the pin-hole disk and an ophthalmoscopic examination are of great value. By the first we can determine if the vision is improvable by glasses and, if so, to what extent. The pin-hole was not employed in this case, but if it had been it would have shown whether R. E. had any reading vision, and whether L. E. was susceptible of any greater improvement than $\frac{20}{40}$. By the ophthalmoscope we are enabled to locate the cause of the impaired vision and determine the character of it. In this case the seat of the trouble is apparently located in the retina and optic nerve, and the character of it is an atrophy.

It is hard to imagine that any one would be so unconcerned about their sight (certainly the most valuable of our senses) as to live until the age of forty-six years with one eye almost blind and the other possessing only one-fifth normal vision without making an effort for their improvement by glasses or treatment.

In any case where it is impossible to raise the visual acuity to normal by glasses, and especially where the ophthalmoscope shows intra-ocular disease, as in this case, it is a safe rule to refer the patient to an oculist.

"T. R."—A boy, four years and four months old, has squint in the L. E. Would strong spherical lenses for constant wear correct the defect? Visual acuity normal in both eyes. What strength would you suggest?

Convergent strabismus making its appearance at this age is almost invariably due to hypermetropia. The removal of the cause by the correction of the hypermetropia by convex lenses is urgently indicated, and if worn as soon as the deviation manifests itself, glasses may be confidently expected to effect a cure. We are told the visual acuity is normal in both eyes, but we are not informed how this fact has been determined, as this must be a matter of much difficulty in a child too young to know the letters. We are asked, if "strong" lenses would correct the defect and what strength we would suggest. This depends entirely upon the degree of hypermetropia which we are assuming is present in this case. If there is no hypermetropia, convex spheres would be valueless. If this error exists it must be measured, and our only method in a child of this age is retinoscopy. We would advise glasses strong enough to correct the full amount of hypermetropia that can be detected by the retinoscope. The glasses should be worn constantly—that is, they should never be removed except for toilet purposes and when the child is put to bed. The lenses should be large and centered for distant vision. Usually the sight of the squinting eye becomes greatly impaired. In this case, as yet, this has not occurred, and the thought to be kept constantly in mind is to prevent any such impairment. For this purpose the right eye should be continuously occluded for a time; by this we mean not only for a part of each day, but rather for several days at a time. This may be accomplished by means of a rubber blinder slipped over the right lens. It may be advisable to consult a physician and place this right eye under the influence of atropine. This makes the hypermetropia in this eye absolute, thus impairing the sight and throwing the burden of vision on the squinting eye. It should be noted that we do not advise the drug for both eyes, but only for the deviating eye.

In order that a correct and definite understanding may be had of each case submitted, it is necessary that correspondents should give ALL the particulars asked for at the head of this page.

"J. A. L."—Can I obtrude upon your department of "Optical Questions and Answers" without being misunderstood? I am very much interested in all pertaining to optics in your valuable journal, and from this department much practical knowledge can be obtained by one who, like myself, has much to learn. I usually read the questions and answer them in my own way; then, by comparing my answer with the answer given, I frequently get new lines of thought and come out benefited. In the July Keystone, M. & M. ask three questions. In answering the second question the reviewer appears to me to have been hurried, and in consequence did not give the subject due consideration, and the question should, I think, receive further consideration before dismissal. The question I refer to is: "What is the correcting glass for an eye which can read no nearer than 30 cm. and whose amplitude of accommodation is 5.33 D.?" The reviewer thinks there is a discrepancy in the statement. With your permission, I will answer the question as I understand it, and will gladly receive any necessary corrections. The eye in question is undoubtedly ametropic, and the best plan will be to compare it with the emmetropic eye, which I will do briefly. An emmetrope looking at an object 30 cm. distant will use 3 D. of accommodation. The patient under consideration has used 5.33 D. in looking at the same point, and has used 2 D. of accommodation more than the emmetrope. Why? The indication is that the refractive power of this eye is deficient and the ciliary muscle is called upon to supply the deficiency. The eyeball is shorter than the emmetrope's, the far point is negative and the accommodation must be brought into use in order to bring parallel rays to a focus on the retina and put him on a par with the emmetrope. From this point on, each would use the same amount of accommodation, 3 D. The conclusion arrived at by the foregoing reasoning is that the patient is a 2 D. hypermetrope and the correcting glass is + 2 D. Am I right?

The near point is the closest point at which it is possible to see by the strongest effort of accommodation; therefore the position of the near point indicates the amount of accommodation that is exerted. Our usual method of determining the amount of accommodation is to measure the distance of the near point and convert into D's.

An emmetrope looking at an object 30 cm. distant uses 3.33 D. of accommodation: to this we are all agreed. But how does "M. & M." or "J. A. L." know that this eye is using 5.33 D. of accommodation at this distance? If the eye was really hypermetropic 2 D., then it would use 5.33 D. to see at 30 cm., but there is nothing in the description of the case to indicate the existence of hypermetropia, except the correspondent's statement that the amplitude of accommodation is 5.33 D., but we are not informed how this has been determined.

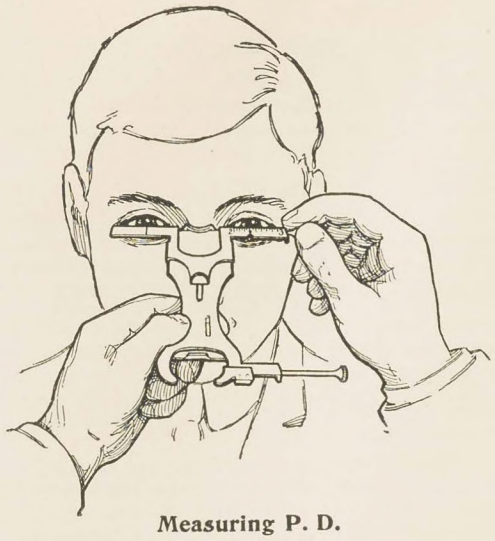
The fact is that in hypermetropia, where some of the accommodation must be used to maintain distant vision clear, there is a deficiency of available accommodation for close use, which would show itself by a recession of the near point. Inasmuch as the normal amplitude of accommodation lessens from year to year, it becomes necessary to know the age of a patient when we wish to compare the accommodation of an ametropic eye with the normal standard: only in this way can we learn whether or not there is a deficiency of accommodation.

Leaving the question of age out of consideration, an emmetrope with a near point of 30 cm. possesses 3.33 D. of accommodation. If 2 D. of this accommodation was needed for distant vision, then only 1.33 D. would be available for close use, in which case the near point will have receded to 75 cm.

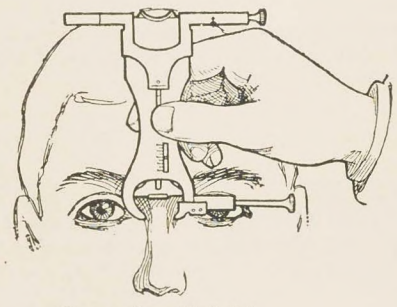
With the meager information afforded by the question, it is impossible for any one to say what the correcting lens should be.

"H. K. D."—Lady, aged twenty-five, comes to me wearing —3.25 ax. 180°, O. U. This correction has been worn for two years with a fair amount of comfort, but lately has suffered from headache, which she ascribed to gastric trouble, simply coming to me on the advice of friends to see if I could give her anything better. The conditions under which I work do not give me a fair opportunity to use objective tests, so I rely on my trial lenses. Vision without glasses $\frac{20}{100}$. She rejected + lenses and promptly accepted — 3.50 ax. 180°, with which she obtained $\frac{20}{20}$ easily. As she persistently refused even a — .25 sphere, in combination, I thought it possible that a pseudo-myopic condition existed, and fogged R. E. with a + 6, with the result that she read $\frac{20}{30}$ with + .75 sphere. I did not get time to fog the other eye or to try + cylinders, and she left, arranging to see me again. Later I saw her and she had been to an oculist who told her that she is myopically-astigmatic, and when she obtains her Rx. from him it will be of the same character as she is wearing but stronger. He told her to read less, give up drawing, etc. I wish to know whether it is possible for any sphere to improve the vision of a person who is nearly a myopic astigmat of — 3.25 to the extent that it did in this case. I am unable to send details concerning accommodation, but would be glad of your opinion. Does the wearing of — 3.25 for two years without discomfort, prove the correction to have been the proper one? If a false myopia exists would not the correction, as stated, have made the vision worse or caused much discomfort?

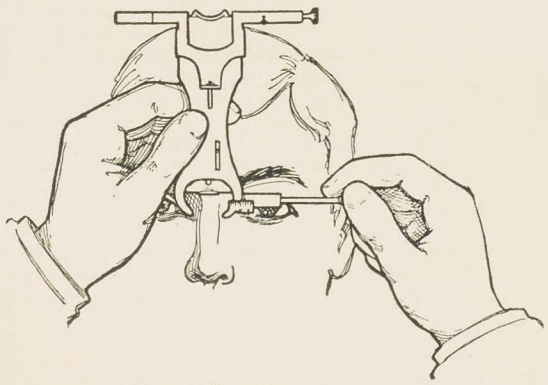
If naked vision is $\frac{20}{100}$, and if by the fogging method it is improved to $\frac{20}{30}$ by + .75 D. sphere, hypermetropia is certainly proven to exist. There must have been spasm of accommodation of such an amount as not only to conceal the hypermetropia but also to render the eye apparently myopic, which spasm relaxed under the fogging, causing the false myopia to disappear and revealing the hypermetropia. It would not have been possible for this convex sphere to afford so good an acuteness of vision if one meridian had really been myopic to the extent of 3.25 D. The fact that these concave cylinders were worn without discomfort does not prove that they were correct, because the accommodation may have been vigorous enough to stand the extra effort for these two years, and perhaps is just now beginning to break down under the strain with the result of causing headache. We are inclined to think that the case is one of mixed astigmatism, and that the accommodation in overcoming the hypermetropic meridian makes the myopic meridian more myopic. The description of the case is not complete enough to enable us to make a suggestion as to what lens is indicated as the proper one to afford relief.



Measuring P. D.



Measuring Height



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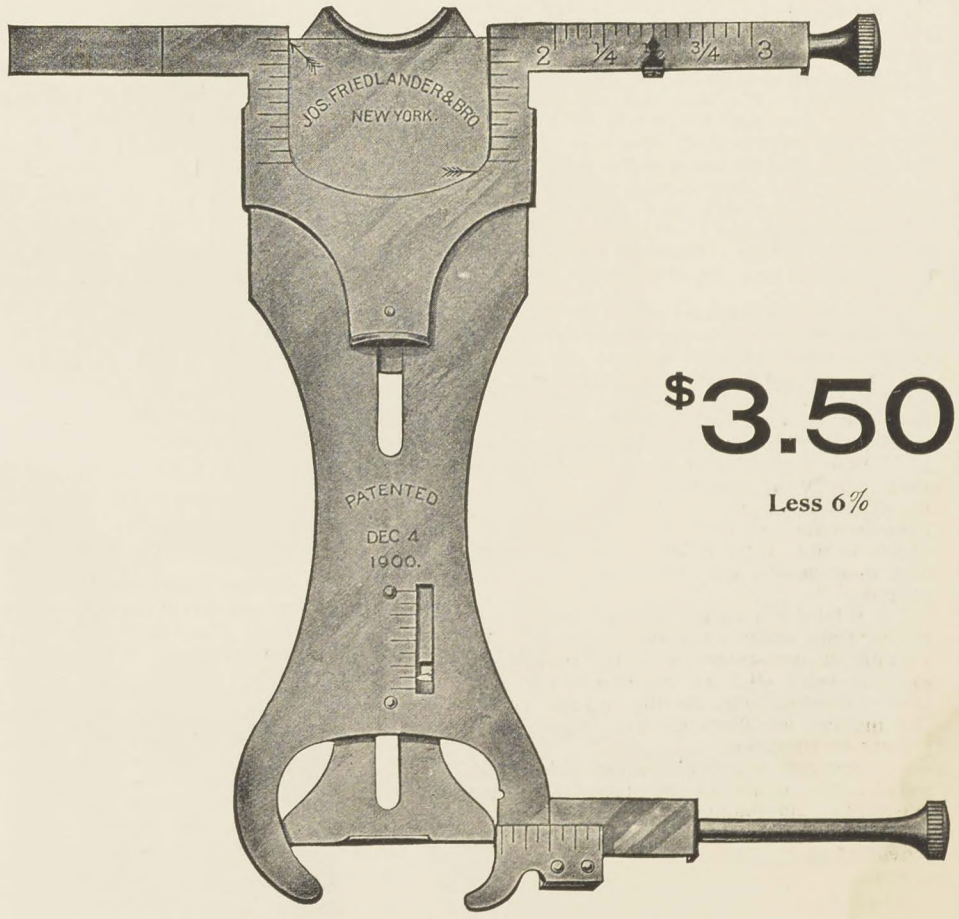

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"Ocular Neurology"

The Future Field of the Optometrist

A Paper Read Before the Canadian Optical Association by JOHN C. EBERHARDT, Dayton, Ohio.

IN reading the invaluable contributions of that eminent authority, Dr. George M. Gould, I was impressed by one constantly recurring statement, "that the various phases of suffering traced to visual defects always resulted from excessive use of eyes at the near point—cessation of such use resulting in decrease of discomfort; this same point being emphasized by many other writers, who have endeavored to analyze the various forms of nerve disturbances now recognized as ocular reflexes. This led me to investigate the action of the ocular muscles at the near point, and as a result I arrived at the conclusion that muscle tests heretofore devised had failed in giving reliable results because accommodation had been disregarded. In other words, the ideal condition of ocular equipoise is that in which the fixation angle necessary to obtain visual images upon exactly corresponding portions of the two retinæ (no matter whether vision is being accomplished at fourteen inches, twenty feet or intermediate distances) should always be that angle which is induced by the innervation being sent to the extrinsic muscles in common with the functions of accommodation, and that therefore a test to determine whether or not a harmonious action between accommodation and convergence, or rather, fixation (parallelism being as essential as convergence for binocular vision) exists while eyes are employed at the near point, would lose all value if accommodation was disregarded.

An Objective Phorometer

These investigations led to the construction of an objective phorometer, which the speaker described in his address at the Milwaukee convention. While perfecting this instrument, the question constantly presented itself "cannot this same principle be applied subjectively?" I am glad to say that a solution finally suggested itself, and that I am favored in being able on this occasion to present to the optical world a simple method for subjectively investigating simultaneously the relative activity of the recti and oblique muscles while the accommodative functions are in a state of enforced activity, the desire for fixation having been suspended, thereby absolutely disassociating accommodation and convergence.

You are all familiar with the old line and dot test in which by means of the double prism before one eye, two vertically displaced artificial images of the dot are seen—the other eye seeing the real dot, which, it was stated, should be seen by the orthophoric eye perpendicular to and in center of dots appearing above and below, but as it requires but an indifferent effort to see this dot, the maximum accommodation for the given distance was not enforced and this test, as a consequence, lost its value. The test for the oblique muscles was made by observing a single parallel line through double prisms, thereby producing the doubling of this line, the other eye seeing a third (the real image) between these artificial lines, which should be parallel and equi-distant if a normal condition of the oblique muscles existed. This test also loses value unless the maximum accommodation is enforced, as will be demonstrated by the following analysis of the phenomenon called "cyclophoria."

If a + 2 D. cylinder is held ten inches from the right eye, the left being closed, and a vertical object such as the edge of a building is observed, it will be noticed that if the cylinder is slightly rotated that portion of the building seen through the cylinder will tilt or assume an oblique angle. It can therefore be readily appreciated that should an astigmatic error at an oblique angle exist in an eye, the retinal image would be formed at an oblique angle also, and as the images formed in the two eyes must be not only upon corresponding portions of the two retinæ, but also exactly parallel to each other, it can be understood why nature is called upon in these disturbances to exert a tension upon the oblique muscles to so rotate the eyeballs as to produce a vertical alignment, which tension, owing to the peculiar attachments of the oblique muscles, would either turn the eyeballs in or out, as well, thereby producing pseudo-eso, or exophoria, necessitating a neutralizing tension of the interni or externi muscles.

A New Muscle Test

An explanation of the muscle test presented for your consideration will possibly assist in elucidating the phenomena described. Upon a plain, white card, size of reading test chart, appears a single line of reading matter, composed of type the size of Snellen's No. 3, in front of which is placed a dot one-eighth of an inch in diameter; if the double prism is placed in trial frame before patient's right eye and opaque disk before other eye, he will see two lines of print and two dots; when other eye is uncovered he will see third line which, if emmetropia and orthophoria exist, will be vertical, equi-distant, parallel and clearly legible. We will analyze the effect of this test upon the eyes: The desire for convergence, or binocular fixation, is suspended; for the right eye fixes the upper and lower line, while the left eye fixes the middle line quite independently of its mate, thereby disassociating these functions. However, as the patient is caused to read the line of print the maximum accommodation for this distance is enforced, and should a refractive error exist, resulting either in an excessive or insufficient accommodative effort, either an excessive or inadequate convergence would ensue, evidencing itself by a corresponding lateral displacement of the central dot and line. Should oblique refractive error be present, producing a torsional tension of the oblique muscles, it would evidence itself by a tilting of central line. Should patient be a presbyope, of 1 or 1½ D., with normal refraction, a significant phenomenon will evidence itself, demonstrating that in some manner the converging stimulus does aid accommodation. By an effort he will be able to read the print in test line even up to twelve inches without the assistance of lenses; when, however, the double prism is placed before the eye, he will find that central dot is displaced laterally, and that print has ceased to be legible; the placing of the + sphere indicated by existing presbyopia before eyes will not only bring dots to a vertical and central position, but will also make line legible.

A Case in Point

One of our prominent jobbers and manufacturers, well versed in optics, a few days ago subjected himself to this simple test. He at once stated that central dot was displaced decidedly to the right and much nearer the bottom. He took from the test case a pair — 1½ D. spheres, this being his correction, which, when placed in trial frame, instantly produced both vertical and central alignment of dots. What was the philosophy of this phenomenon? The displacement of central dot indicated that the innervation being sent to interni in common with the ciliary was not producing an adequate convergence. In other words, he was not using the maximum normal accommodation. Why? Because he was a myope of 1½ D. The placing of these lenses in front of the eyes enforced that amount of additional accommodation, which brought with it the corresponding increase of convergence, demonstrating that the myope may be able to read without lenses; but that in so doing, particularly when it is considered that his near point is decreased, he is compelled to exert an unnatural tension on his converging muscles, which sooner or later will lead to exhaustion unless nature comes to his rescue and produces a hyperdevelopment of these members.

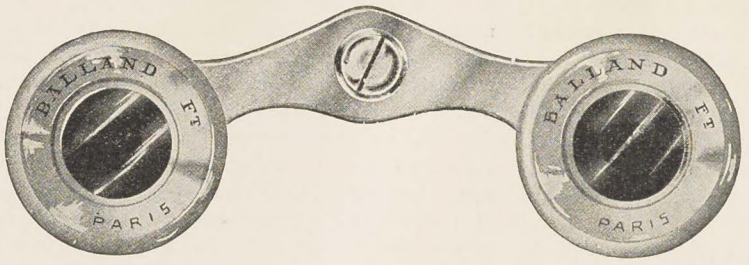
The Value of Prisms

The speaker has frequently stated that his fifteen years experience in prisoptometry had destroyed his confidence in the value of prisms as corrective agents. A typical case quoted by him on several occasions (as well as numerous other similar cases) seemed to justify him in his loss of faith, and as the analysis of this particular case has been the means of obtaining new light and the discovery of invaluable truths, it will be desirable to restate the case in detail. J. C., age thirty-five, first presented himself twelve years ago suffering from troublesome visual disturbances due to nine degrees of esophoria and three degrees of hyperphoria. The most critical examination failed to locate any refractive error; exercises for muscles and every conceivable prism correction were experimented with in vain. About six years ago it was discovered that the supposed hyper-esophoria was in reality an extreme cyclophoria. The rythmic exercises suggested by Dr. Savage were persevered in for protracted periods, but after faithful efforts, covering nearly two years, no improvement being noticeable, in fact, discomfort having increased, these were abandoned. During all this period, muscular imbalances remained the same; the duction test showing interni to have thirty-five degrees and over, while externi could scarcely fuse one degree. Persistent efforts to increase abduction failed of success, and invariably caused acute discomfort. It was the speaker's good fortune to obtain the services of Dr. Chalmers Prentice, of Chicago, for an address during the annual convention of the American Association of Opticians, held at Milwaukee last month, which address has excited more editorial comment in our prominent daily journals than any contribution on a like subject, and which, as a consequence, has had great value in calling the attention of the general public to the marked therapeutic value of prisms and lenses, and the vast possibilities of optometry. I was most fortunate in being able to submit to the doctor for examination the case of J. C. referred to. When he had completed his investigation, the doctor said to me, "Make the following notations: no refractive error, marked cyclophoria, nine degrees of esophoria, three degrees of hyperphoria; adduction, excessive; abduction, nil."

Analysis

1. Excessive convergence calling for constant effort of antagonistic muscles to maintain parallelism. 2. Inability of the externi to accomplish this owing to their evident depleted condition, necessitating an abnormal tension of the inferior obliques in order to supply the necessary neutralizing divergence, thereby, however, also producing a torsional movement resulting in manifested cyclophoria.

(*Continued on page* 1673)



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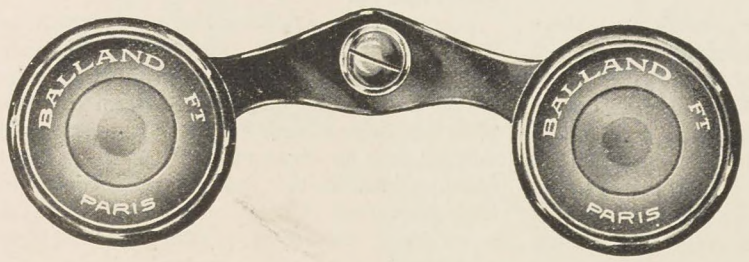

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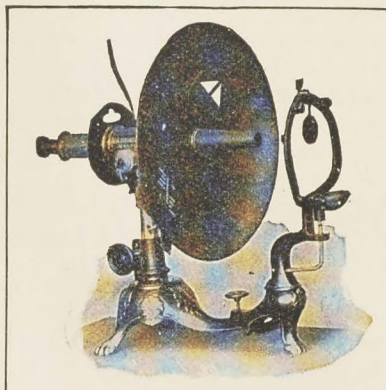

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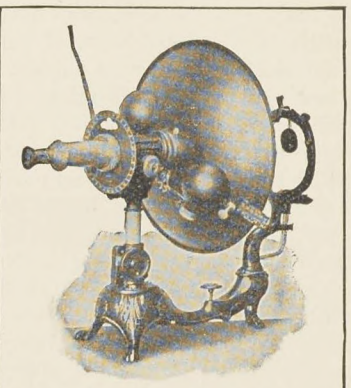

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"Ocular Neurology"

(*Continued from page* 1671)

New Lines of Thought

These terse statements opened up entirely new avenues of reasoning, and convinced the speaker that efforts had heretofore been totally misdirected. The doctor, continuing, said: "You have found your efforts to neutralize this excessive innervation to the interni to be of no avail. Suppose, instead of maintaining the abnormal tension involved in antagonizing the excessive inward tendency, you enforce relaxation of those over-stimulated members. If you wish to relax ciliary activity, you supply artificial accommodation by means of + lenses. Suppose you supply in the case of J. C. five degrees of artificial convergence by means of prisms base in, what would be the result? Near vision through these prisms can only be accomplished by forcing the interni to relax, because you have increased your nine degrees of esophoria to fourteen degrees. The use of these prisms will at first be difficult, but persist, gradually increasing their power; constantly watching your externi and noting whether or not relaxation of interni is restoring efficiency of the depleted externi, and persisting until these externi will admit of individual exercise, thereby forcing nerve and blood supply to these depleted members, and gradually re-establishing a condition of equipoise between the lateral muscles.

Conclusions Verified

Upon my return home I individually again verified conditions, and found them as previously detailed. Esophoria being fully nine degrees; externi fusing one degree only—and with difficulty. Plus one and a half diopter spheres, combined with two and a half degrees prisms, base in, were supplied, and have been worn for all near work. After the first few days eyes accepted these with comfort, and near vision by artificial light became more satisfactory than it had been for years. After three weeks' wear, re-examination shows the following remarkable results: Esophoria has been reduced from nine degrees, of nearly twelve years' standing, to three degrees; externi now fuse four degrees with ease—and at times five degrees; cyclophoria has almost entirely disappeared; neuralgic pains in region of occiput, and extending forward to back of ears, with a constant feeling of discomfort in muscles of neck, have largely disappeared. Applying the dot and line test previously described, a significant and interesting phenomenon is encountered: Patient, without lenses, can read the line of test letters up to within ten inches; when, however, double prism is placed before right eye, central dot moves to the left, indicating excessive convergence, also moves downward and central line of letters tilts downward on right end; but what is most significant, the mere disassociation of the functions of convergence and accommodation results in an utter inability to read the heretofore legible line of test letters, any effort to make them legible causing the central dot to move still more to the left; whereas the placing of a pair of + 1½ spheres not only brings test letters out clear and well defined, but dots assume a vertical and central position, the cyclophoric tilting being almost neutralized, thus again giving tangible evidence of the intimate inter-relation of the entire group of ocular muscles, and demonstrating the value of this simple test for corroborative purposes, if nothing else.

The thoughtful student cannot digest the foregoing without realizing the far-reaching significance of the truths contained therein. The optometrist must therefore thoroughly impress upon his mind the following: "That ideal visual comfort is unobtainable unless a condition of orthophoria, as well as emmetropia, can be established."

New England Association of Opticians

The regular monthly meeting of the New England Association of Opticians was held at Young's Hotel, Boston, on Tuesday evening, September 20th. The following were elected to membership: George A. Breault, 20 North Main Street, Fall River, Mass.; W. Webster Gleason, M.D., Provincetown, Mass., and Alfred A. Day, 43 Main Street, Brockton, Mass. The "minimum price-list" formed the principal subject of discussion. The following course of lectures has been arranged for:

September 20, 1904, "A Binocular Neutralizing Optometer," R. A. Douglass Lithgow, M.D.; October 18, 1904, "Light," Prof. W. J. Drisko; November 15, 1904, "Light" (continued), Prof. W. J. Drisko; December 20, 1904, W. C. Rucker, M.D., will speak on a subject to be announced; January 17, 1905, "Light" (concluded), Prof. W. J. Drisko; February 21, 1905, "Mechanical Optics," Herman L. Klein; March 21, 1905, "Eyeglass Frame Fitting," H. C. Doane.

On April 18, 1905, there will be a "ladies' night and banquet," and on May 16, 1905, the annual convention will be held.

Kentucky State Optical Association

The semi-annual meeting of the Kentucky State Optical Association will be held on Tuesday, October 18th, in Winchester, Ky., where preparations are already being made for a pleasant and profitable time. Several interesting papers will be read, and the question and answer system started at the last meeting will be more fully developed. There will also be discussed a business question of peculiar interest to every optician in the State.

It is, therefore, especially desirable that every member and all other qualified opticians in the State be present at this meeting, which will be brought to an enjoyable close with a banquet.

Canadian Association of Opticians

The second annual meeting of the Canadian Association of Opticians was held in the Temple Building, Toronto, September 7th and 8th. President Samuel Grant, of Montreal, presided, and there were seventy in attendance. The annual report presented by the secretary, Alex. Moffatt, of Brantford, showed that during the year there has been an increase of sixty-five in the membership, making the total now 149. The advisability of incorporating the association as a first step toward giving opticians a recognized professional status formed the subject of a lengthy discussion, but the general impression was that before taking such action the society should further increase in membership.

In his annual address President Grant urged the prosecution of a vigorous propoganda in order that the association should be made a thoroughly representative body. He announced the receipt of congratulatory telegrams from the American and British associations. John C. Eberhardt, ex-president of the American Association of Opticians, delivered an address on "Ocular Neurology," which is published in another portion of this issue of THE KEYSTONE. This brought the proceedings of the first day to a close.

On the second day Dr. Earl J. Brown, of Chicago, delivered a lecture on the "Physiology and Anatomy of the Human Eye," illustrating his talk by stereopticon views. Montreal was decided upon as the place for holding the next meeting. Officers were elected as follows: President, S. Grant, Montreal; vice-presidents, Alexander Moffatt, Brantford; W. G. Maybee, Winnipeg; Charles Rae, Bowmanville, and James Kearney, Renfrew; secretary-treasurer, T. H. Brown, Toronto; executive committee, E. Culverhouse, H. J. Geiger and H. W. Batting, all of Toronto, and George Forbes, St. Thomas; membership committee, A. E. Lewis, F. E. Luke, E. Montgomery and Mr. Elliott, all of Toronto.

At the conclusion of the second day's business a banquet was held in the King Edward Hotel, and at this function addresses were made by Dr. Earl J. Brown, J. C. Eberhardt, Prof. S. Grant and E. Culverhouse.

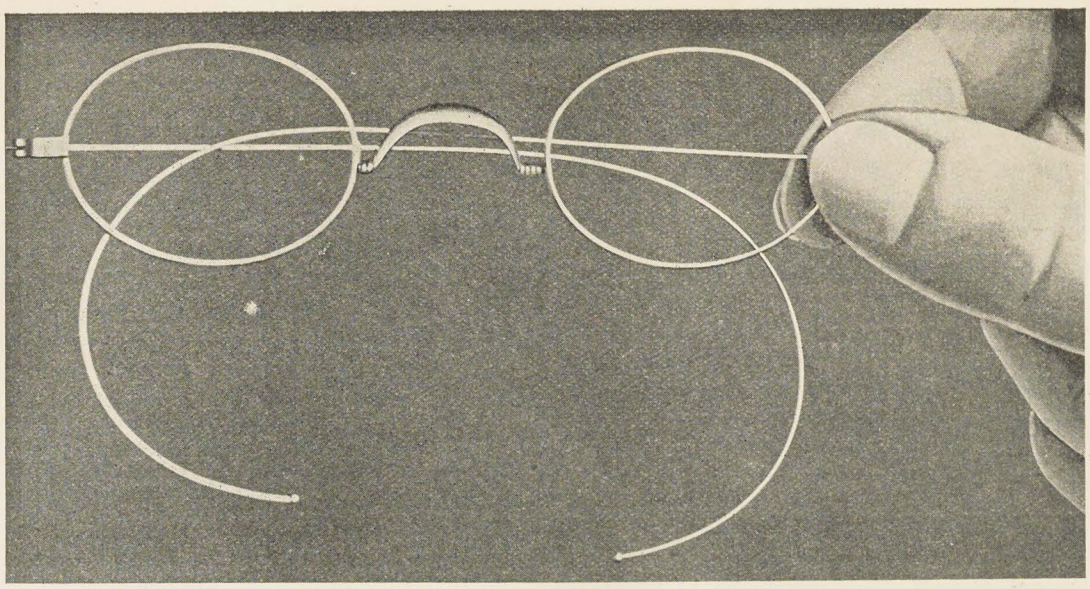
Chicago Optical Society

The Chicago Optical Society assembled in the rooms of the Chicago Jewelers' Club, on September 6th, and after partaking of a supper proceeded to hold a regular meeting. The reading of the minutes of the previous meeting was dispensed with. The question as to whether each regular meeting should be preceded by a dinner, and if so whether the expense thereby incurred should be defrayed out of the society's funds, was discussed, and upon motion it was decided that the president appoint a committee of two to consult with the officers of the Jewelers' Club in regard to the expense of the rooms and supper. W. C. Sommer and O. J. Halbe were appointed as the committee for this purpose.

It was also moved and carried that at the regular meeting on October 6th, a supper should be provided if satisfactory arrangements could be made with the Jewelers' Club. Professor Rogers gave a short talk on the recent decision of the Supreme Court, which affirms that an optician does not conflict with the medical act if he fits glasses to cure headaches, etc. The guest of the evening, Dr. Chalmers F. Prentice, made a few appropriate remarks, in which he expressed his willingness to aid in advancing the work of the society.

Traveling Ophthalmic Hospitals

About ten years ago Russia instituted the traveling ophthalmic hospital and in 1901 had thirty-two in operation. It is merely an ophthalmic hospital or dispensary, which is set up in a community and remains there until all the persons whose eyes need attention have been treated, when the dispensary moves on to another adjoining field. The aim was to combat trachoma in particular, which is extremely prevalent in Russia. The expenses of these leisurely-traveling hospitals are paid out of a fund instituted by the Empress. Sir Ernest Cassel, of Great Britain, placed at the disposal of the Egyptian government in 1903 the sum of $200,000 to be applied for a similar purpose in Egypt. The Egyptian hospital consists of eight tents and an adobe kitchen: two for patients who had undergone intraocular operations and one for out-patients. The largest tent is the operating room, and the operator, his assistant and the nurses and servants occupy the three other tents.



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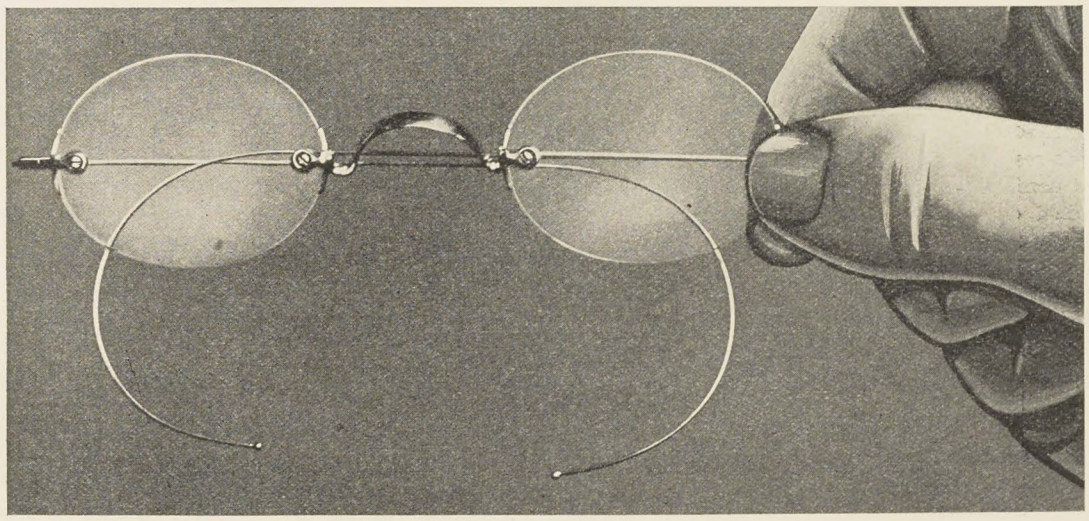

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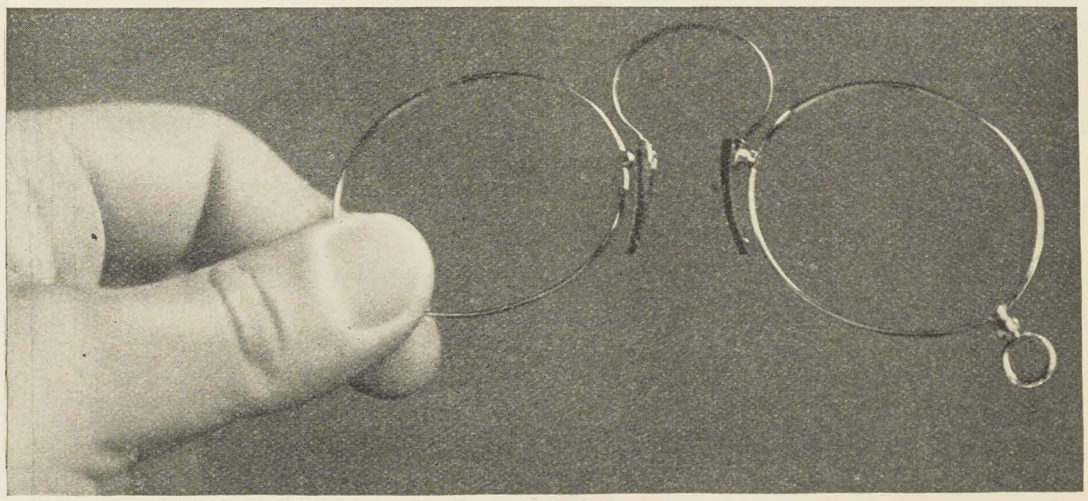

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May 1st we placed on the market our new special 10 K. gold riding frame No. 1136. Following it July 1st with its companion No. 1129 in a solid gold 10 K. riding rimless mounting. The success of both the new frame and mounting has been phenomenal, proving conclusively that the optical trade at large was ready to welcome a new line of solid gold goods bearing the name and reputation of the Geneva Optical Co. Our addition to the special line October 1st is a new 10 K. solid gold offset guard eyeglass frame No. 1163, good weight and elegant finish, made in 1, 0 and 00 eye size with Fox C shell guards and ring handle, with either hoop or oval reduced or full spring.

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Determination of Heterophoria

Some Objections to Usual Methods; With Descriptions of a Trial Cell to Prevent Accidental Rotation of Displacing Prisms and a Convenient Lighting Apparatus, Particularly Adapted to Maddox Rod Test at Reading Distance.

By Edw. H. Schild, M.D., in *The Ophthalmic Record.*

Of the various methods for determining the kind and quantity of heterophoria, those based on the use of prisms or Maddox rod are probably most accurate and generally used. When producing artificial diplopia, by means of displacing prisms, serious errors may creep in and misleading deductions result therefrom unless great care be taken to have the base of the prism accurately placed. Unfortunately, such errors are most likely to occur, and also most important in the tests for hyperphoria, on account of the strong prism required to produce diplopia and the necessity for the exact determination of the state of muscular balance. This objection is practically eliminated by using the double prism, but here again there is very often a strong tendency to fusion of the direct with one of the two false images; furthermore, the line of junction of the two prism bases must be accurately centered before the pupil. Prism tests at best are somewhat tiresome and confusing, and require a certain degree of intelligence on the part of the patient. The Maddox rod is more convenient to use; the true and false images are readily recognized and differentiated even by children; a slight deviation of the streak of light from the horizontal or vertical direction does not matter seriously, since a portion of the streak midway between its ends is compared with the original source of light, and this central portion is but slightly, if at all, displaced; besides, the test is more rapidly accomplished with the rod than by use of prisms.

In spite of its advantages, the use of the Maddox rod for the determination of heterophoria has been restricted practically to the distance test (twenty feet), and in the various text-books (Fuchs, De Schweinitz, Savage, Thorington, etc.) is usually so recommended, while for the tests at reading distances, prisms, usually the double prism, are specified. This is no doubt due to the fact that, as a general rule at least, we still adhere to the time-honored candle flame as a source of light and test object; which, fairly accurate for distance, is entirely too crude to be used at a short distance. An average-sized candle will yield a flame about two inches high, so that the horizontal streak (false image of the Maddox rod) may vary considerably and still appear to pass through the image of the flame seen by the other eye; hence a certain amount of hyperphoria may escape our observation, depending on the judgment of the patient and the distance, or rather nearness, of the candle flame. If the candle and its holder be used as a test object for vertically displaced images, the upper extremity of one image may overlap the lower extremity of the other and give rise to inaccuracies. It would be better to place in front of the light a dark screen provided with a central opening of a size proportionate to the distance, so that the patient can see a distinct bright spot on a dark background. This would furnish a test object of unifom width in all directions, equally adapted for either prisms or rod. The screen should be of ample size (at least two feet square for a twenty-foot distance), and without a frame or anything suggestive of a border, so that an overlapping of images may give the impression of a continuous surface.

In order to avoid errors from prisms accidentally rotated, I have found it convenient to have a set of prisms (6°, 10°, double prism and Maddox rod), mounted, each in a special cell of the standard size to fit the trial frame. This cell (illustrated in Fig. 1), has no handle, but, instead, is provided with four pegs extending outwardly from the periphery and exactly 90° apart. The trial frame in its stead is provided with a slot just wide enough to to readily admit one of the above-mentioned pegs, or else has two shoulders diametrically opposite,

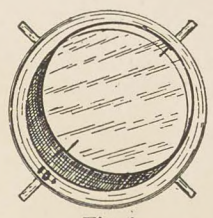


Fig. 1

on which two opposite pegs may rest when the cell is put in place. Fig. 2 shows this latter arrangement. Slot or shoulders must be so situated that the pegs will correspond to 0°, 90° and 180° on the trial frame. With such an arrangement the prism

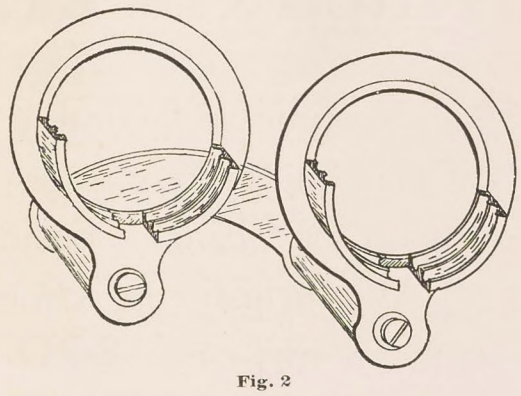


Fig. 2

or Maddox rod cannot become displaced, accidentally or otherwise, during the test; it must always point in the direction intended. I had the trial frame of my wall bracket (usually called optometer in the catalogues) altered to accommodate such cells, by simply filing a wide notch into the semicircular grooves at their lowermost portion, as shown in Fig. 2. When the trial frame is leveled, a prism dropped into the "nest" will project the image in a truly vertical or horizontal direction.

That the Maddox rod test may be made available for reading distance, I have devised and use daily a simple arrangement, based on the principle of the above-mentioned screen, which I will endeavor to describe. This apparatus consists of a round, flat shield of thin, hard rubber (Fig. 3), about 2½ inches in diameter, provided with a central pin-hole opening, which should be countersunk on both sides, so that the margin of the hole may be quite thin. Immediately back of this opening is a small electric lamp (see Fig. 4) of the kind used in electric ophthalmoscopes. This lamp is enclosed in a tube, preferably of metal, one end of which is attached to above-mentioned shield, the other end being closed by a cap provided with a socket to hold the lamp and also with a small push button to close the electric circuit and light

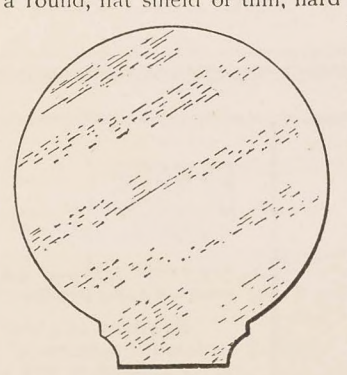
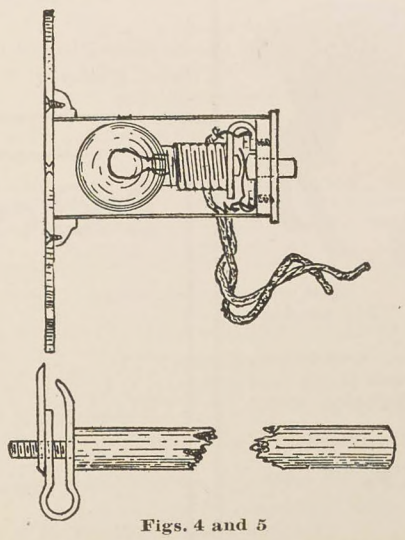


Fig. 3



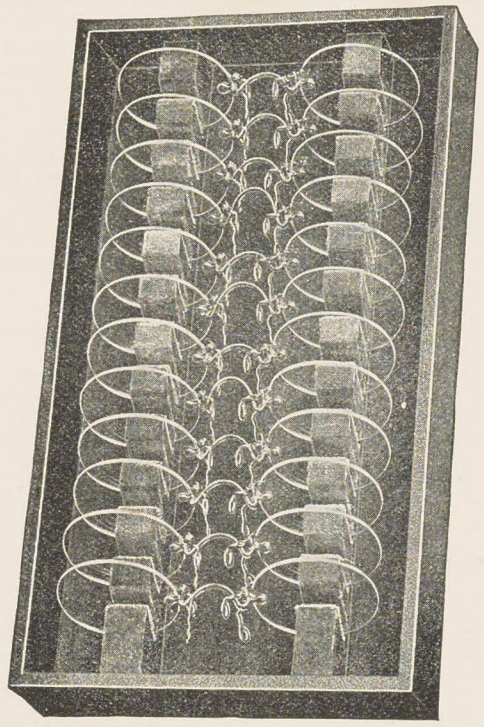
Figs. 4 and 5

the lamp. A small (5 mm.) opening or sight hole is put into the tube immediately over the film, so that the surgeon, from his position can observe the proper lighting of the lamp. The shield has a short projection beyond the circumference, by means of which the device can be held in the clip usually attached to phorometers and intended to hold a test card; or whereby it can be clamped in a special holder (Fig. 5) adapted to the purpose and held by hand. By means of the holder the apparatus can be held steady, at reading distance, with the pin hole properly placed. A silk-covered double conducting cord conveys the current from a battery box or convenient place on the wall. Three ordinary dry cells furnish requisite current, or street current, properly reduced, may be used.

The method of using the device is quite simple. The trial frame is placed on the patient's face with the Maddox rod before one eye; the other eye may be provided with some form of rotary prism in the usual manner. The electrical connections having been made, the surgeon holds the apparatus by one hand, with the thumb resting gently on the push button, while his other hand is left free to manipulate the correcting prism. In order to obtain a bright and distinct false image, it is, of course, essential to have lamp film, pin hole, rod and pupil of patient's eye in a straight line, so that the direct rays may fall on the Maddox rod. This is readily accomplished by resting the free end of the holder against the face of the patient, so that the rod or stick shall be in a line approximately parallel to an imaginary line drawn from pin hole to pupil. The canine fossa of the corresponding side of the patient's face about conforms to this situation with the average adult. The surgeon now presses the push button and directs the patient's attention to the streak and point of light (in the pin hole opening), at the same time observing for himself, by means of the sight hole, whether the lamp lights. By alternately pressing and relaxing the button, the streak may be made to appear and disappear several times, thus more forcibly attracting the attention of the patient, should he be slow to respond. If one desires to use the pin hole light in connection with the Stevens phorometer, and such use is recommended, the holder may be dispensed with if the phorometer has a projecting arm provided with a clip. The pin hole must then be properly adjusted, once and for all time, by shifting the shield in the clip until the best results are obtained, after which it is not removed from the clip, the arm being simply swung to one side after use.

This little device, used in connection with the Maddox rod, will readily disclose a hyperphoria of ¼°. When testing the lateral muscles it may be necessary to encourage the patient to stimulate his accommodation by asking him whether "the dot of light is round or star-shaped," etc. The light may also be used for near tests without the Maddox rod, in conjunction with prisms, in the same manner that the candle flame or large screen is used for distance tests.

[Although we believe that the little apparatus described by Dr. Edw. H. Schild will be quite useful it cannot be denied that it will not be convenient for every refractionist to use the electric light for this purpose. It seems appropriate therefore to call attention again to a test which, though almost forgotten, allows a very accurate testing of the muscular balance for the reading distance and is much simpler than the expensive contrivance of Dr. Schild. This test usually goes by the name of Dr. Jackson's test for muscle balance at the working distance, and may be applied as follows: Procure a piece of black paper and fasten in the middle a small square of white paper, the side of which measures about 1¼ mm. This white square on the black paper is held at the working distance of about thirteen inches, and looked at through a strong cylinder of from twenty to forty dioptries before one eye, which will see the white square as a gray streak. To test the vertical balance the axis of the cylinder is held vartical, whereby the streak will appear horizontal. To test the lateral balance the axis of the cylinder is held horizontal so that the streak appears vertical. In orthophoria, the streak apparently goes through the spot, while displacement of the streak by the width of the square represents heterophoria of ¼° at the distance of thirteen inches. The greater degrees of heterophoria are measured in the usual way by the prism which will bring the streak back to the square. To insure accuracy in this test the cylinder must be held about one inch from the eye, at right angles to the line of sight, and furthermore so that the eye looks through the thickest part of the cylinder. The latter precaution brings the middle of the streak opposite the square.—Ed.]



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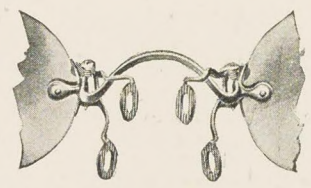

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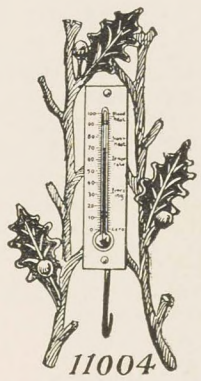

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J. H. SUTCLIFFE, F.R.S.L., F.B.O.A., Secretary, 17 Shaftesbury Avenue, London, W., England.

Canadian Association of Opticians (1896)

SAMUEL S. GRANT, President, Montreal.
T. H. BROWN, Secretary and Treasurer, Toronto.

Scottish Optical Association (1903)

JAMES CHALMERS, President, Springburn, Glasgow.
JOHN LAMONT, Secretary, 514 Victoria Road, Glasgow.

The Australasian Optical Association (1904)

H. A. BARRACLOUGH, B. O. A., President.
A. A. C. COCKS, B. O. A., Secretary, Sydney, N. S. W.

Phi=Omicron Fraternity (1904)

JOHN C. EBERHARDT, President.
C. S. HART, Secretary, Lynn, Mass.

INTERSTATE

New England Association of Opticians (1894)

EBEN HARDY, President, Boston, Mass.
G. A. BARRON, Secretary, 3 Winter St., Boston, Mass.
Meets third Tuesday of each month, except July and August.

Northwestern Optical Association (1901)

J. W. GRAINGER, President, Rochester, Minn.
E. C. ROBERTS, Secretary, Red Wing, Minn.

STATE

Pennsylvania Optical Society (1895)

A. MARTIN, President, Philadelphia, Pa.
C. A. LONGSTRETH, Secretary, 228 Market St., Phila., Pa.

New York State Optical Society (1896)

B. B. CLARK, President, Rochester, N. Y.
ROGER F. WILLIAMS, Secretary, 455 Main St., Buffalo, N. Y.

Indiana Optical Society (1896)

C. M. JENKINS, President, Richmond, Ind.
MISS MARGARET J. ERISMAN, Secretary, Lafayette, Ind.

Michigan Optical Society (1896)

P. SCHOLLER, President, Hancock, Mich.
E. EIMER, Secretary and Treasurer, 105 Western Avenue, Muskegon, Mich.

Iowa Optical Society (1897)

W. B. ANKENY, President, Corning, Iowa.
J. G. MCMASTERS, Secretary, Cedar Rapids, Iowa.

Illinois Optical Society (1898)

GEORGE A. ROGERS, President, Chicago, Ill.
O. J. HALBE, Secretary, 501 Trude Building, Chicago, Ill.
Annual meeting, November 2, 1904.

California State Association of Optometrists (1899)

CHAS. H. WOOD, President, Oakland, Cal.
WILLIAM E. HESS, Secy., 505 Kearny St., San Francisco, Cal.

Oregon Association of Opticians (1899)

J. O. WATTS, President, Eugene, Oregon.
C. L. HAYNES, Secretary, Portland, Oregon.

Washington Association of Opticians (1899)

H. CLAY EVERSOLE, President, Seattle, Wash.
LEANDER BUTT, Secretary, 715 First Ave., Seattle, Wash.

Granite State Optical Association (1900)

L. E. WHITE, President, Concord, N. H.
W. E. BURPEE, Secretary, Manchester, N. H.
Meets third Wednesday of January, March, May, September and November.

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I. M. ADDLEMAN, Secretary, Tomah, Wis.

North Carolina Optical Society (1900)

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SAMUEL RAPPORT, Secretary, Durham, N. C.

Minnesota Optical Association (1900)

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C. A. SNELL, Secy., 608 Nicollet Ave., Minneapolis, Minn.

Maine Association of Opticians (1901)

H. E. MURDOCK, President, Portland, Maine.
ROBERT B. SWIFT, Secretary, Portland, Maine.

Tennessee Optical Society (1901)

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GEO. R. CALHOUN, Secretary, Union and Summer Sts., Nashville, Tenn.

Colorado Optical Association (1901)

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ELMAR H. SCHMIDT, Secy. and Treas., Washington, Mo.

Virginia State Optical Association (1902)

W. WAYT ROYALL, President, Martinsville, Va.
JOHN W. BUCHANAN, Secretary, Richmond, Va.
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Ohio Optical Society (1902)

F. W. WALLIS, President, Columbus, Ohio.
EDWIN L. JONES, Secretary, Sandusky, Ohio.

Kentucky Optical Society (1902)

J. M. IRMEN, President, Louisville, Ky.
C. H. BOWEN, Secretary, Winchester, Ky.
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W. R. BLAKELY, Secretary, Grafton, N. Dak.

New Jersey Optical Society (1903)

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J. J. HARTMAN, Secretary, 16 Howard St., Newark, N. J.

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Texas Optical Association (1903)

DR. R. BESKOW, President, Greenville, Texas.
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J. A. MCAVOY, Secretary, Lowell, Mass.

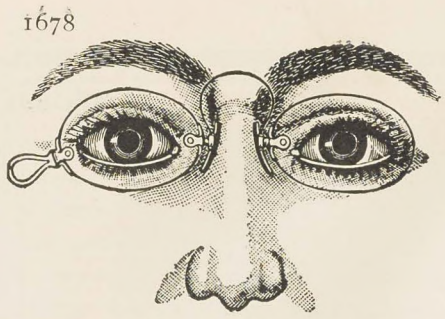
A Halt to the Prosecution of Opticians

THE vexatious prosecution of opticians for alleged violation of medical practice acts has probably been given its quietus by the recent decision of the Illinois Supreme Court, in the now somewhat historic case of the People or State Board of Health against Charles Lincoln Smith. As was stated in our journal at the time, the lower court adjudged the defendant, who is a practicing optician, guilty of violation of the medical practice act of the State and imposed a fine. The defendant promptly appealed the case to the Appellate Court, which reversed the decision of the lower court. The case was then taken to the Supreme Court, which has sustained the Appellate Court in a decision which lays down the law in the case in a clear and unmistakable manner. There is neither obscurity of meaning nor verbal prolixity in this authoritative, but homely, legal pronouncement, which is equally intelligible to layman and lawer. The decision of the court, as delivered by Judge Wilkins, is as follows :

The charge is a violation of sections 7 and 8 of the Act of 1899, to regulate the practice of medicine in this State ; that is, by professing to treat, operate on or prescribe for any physical ailment or any physical injury to or deformity of another, as provided in said section 7, and being an itinerant vendor of an appliance for the treatment of diseases or injuries as prohibited by section 8.

The finding of the Appellate Court is that all the defendant did was to fit spectacles to the eyes of persons of defective vision and sell them to such persons. By so doing he did not treat, operate upon or prescribe for any physical ailment or injury or deformity of another, within the meaning of section 7 ; nor did he, by advertising himself as an eye expert and inviting persous afflicted with certain defects of vision to call upon him, profess to treat, operate upon or prescribe for any physical ailment or physical injury to or deformity of another, but in the same advertisement stated that he did not give medical or surgical treatment. All that he claimed by the advertisement was, that glasses fitted and ground by his method benefited, and had cured headaches, blurring, itching and burning of the eyes, etc. We also think it clear that he was not, under the facts here found, an itinerant vendor of any drug, nostrum, ointment or application of any kind intended for the treatment of diseases or injury, nor did he, by writing or printing, or other method, profess to the public to cure or treat diseases or deformity, by any drug, nostrum or application, within the meaning of section 8. It would be a strained construction of that section to hold that the mere fitting of spectacles to the eyes of a person is an appliance intended for the treatment of diseases or injury of another. As we have said this statute is penal in its character and must be strictly construed. It is a well-known fact that headaches, dizziness and other similar ailments often result from defective vison, which may be relieved by the use of spectacles ; but it cannot be seriously contended that the person who sells such spectacles, or who tests the eyes and fits such glasses, practices medicine or surgery, or professes to cure or treat diseases or deformities thereby. While the statute under consideration is

(*Continued on page* 1679)



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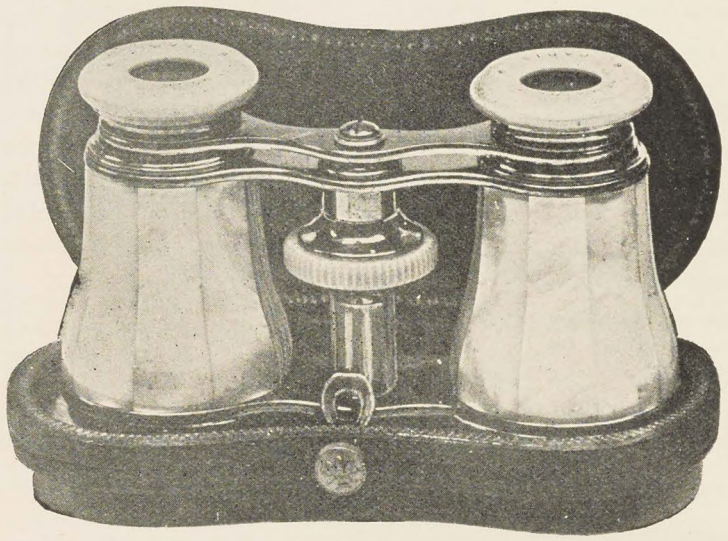

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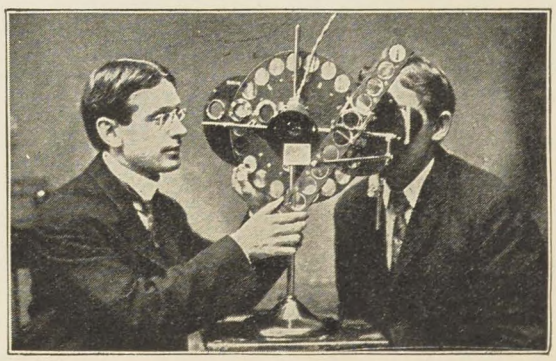

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A Halt to the Prosecution of Opticians

(*Continued from page 1677*)

a wise and humane regulation for the protection of the public, and should be rigidly enforced, the construction here contended for could have no other effect than to bring it into disrepute.

This legal triumph is a tribute to the protective power of organization, as the credit for the victory belongs largely to the Illinois Optical Society, which gave to the defendant financial and moral aid in his legal battle for his rights and the rights of his brother opticians. The force of the decision cannot fail to have its effect on the meddling medical societies of other States.

American vs. British Optical Goods

DISCUSSING editorially the wonderful progress and recognized leadership of the United States in the field of optical manufactures, the editor of the London *Optician* pays a glowing tribute to Yankee progressiveness, and roundly berates his own fellow-countrymen for not taking to heart the lesson taught by their brethren on this side of the Atlantic. He deplores "the uncompromising opposition to change, the radical incapability to appreciate the benefits of a reform in methods and production which stands eternally in the way of the English manufacturer," and proceeds to advise him to study as speedily as possible the methods of the American manufacturers. "That these methods," he writes, "are far in advance of anything in this country is certain; that the American manufacturer will ere long be making serious inroads into the English optical industry in more ways than one is almost equally certain. It is for our people to annex that particular shrewd business insight and enterprise, so admirably exhibited by the Americans, as their own, and to determine that they will profit in time by the example set them. Old patterns must be abandoned, and the new ones which have obtained such a vogue in America must be adopted. There are hundreds of thousands of people—especially the more charming members of the fair sex—who wear no glasses at all now. They decline to disfigure themselves with the outrageously old-fashioned specimens which were not quite a novelty a generation ago. They will not wear the gowns of last season, and certainly not those of the last generation."

Commenting on the editorial from which we have quoted, a Manchester correspondent of the *Optician* asks despairingly: "Why have British opticians not gone ahead like the Americans have? Why do we see so many people wearing cumbersome eyeglasses hanging on to their noses at all sorts of unscientific angles, the wearers' chins uncomfortably elevated in the struggle to keep their glasses from falling off? Why, oh, why, do the thousands of Americans who are now to be seen in our streets, wear eyeglass frames in which they seem to have been born, so perfect is the fit and adherence? Cannot our manufacturers give us similar patterns and workmanship? If not, I fear, with you, Mr. Editor, an American invasion, which will seriously reduce the trade of British opticians."

This is all very complimentary to the American manufacturers, and it also reveals what a vast market awaits our goods in the countries of Europe.

Illinois Optical Society

The annnal meeting of the Illinois State Optical Society will be held in the Masonic Temple, Chicago, on November 2d. Annual meetings of the society were usually held in December hitherto, but assuming that members would be glad to take advantage of the low railroad rates available through the Merchants and Travelers' Association up to the latter part of November, the committee in charge deemed it advisable to anticipate the date originally fixed and thereby insure a large attendance. Dr. Chalmers Prentice will address the meeting, and Gustavus Kahn, of Oshkosh, Wis., will read a paper on "The Effect of Careless Frame Centering and Remedy."

New York City Optical Society

The regular monthly meetings of the Optical Society of the City of New York were resumed on Wednesday evening, September 14th, in Parlor 16 of the Fifth Avenue Hotel. Although the weather was unfavorable, the attendance included several opticians from Brooklyn and New Jersey. The business of the meeting was opened by E. LeRoy Ryer, president of the society. John E. Mayer, chairman of the executive committee, submitted a report, pursuant to which a number of resolutions were adopted.

The committee recommended that instead of meeting in a hotel the society should rent a hall, wherein it would not be shifted from one apartment to another. The president accordingly appointed John E. Mayer, R. M. Lockwood and A. M. Frankel, a committee of three, with power to lease a hall at Sixth Avenue and Forty-second Street, if, after inspecting it, they deemed accommodations adequate and suitable. R. M. Lockwood was chosen as regular lecturer for the reason, and provision was also made for lectures by outside talent. The plan of having each lecture followed by a clinic and the question and answer system, which was followed last year, will again be adopted.

The executive committee recommended the election of officers by mail, the system to be worked by appointing a nominating committee, which would receive petitions from any seven members making nominations. All nominations of this character, it was proposed, should be mailed to the members, who could mark their preferences and return the ballots to the committee. A resolution carrying this into effect was unanimously adopted.

Mr. Lockwood afterwards spoke on "The Various Methods of Testing for Astigmatism," Mr. Ryer's new device, known as the astigmometer, was used in testing a myopic eye, and these features, together with clinical presentations of other subjects, brought the meeting to a close.

Minnesota State Board of Examiners

The Minnesota State Board of Examiners in Optometry met at the State Capitol, September 14th and 15th, to examine a class of twenty-three applicants for registry under the State optometry law. The following were granted licenses to practice: John J. Palmer, Redwood Falls, Minn.; J. H. Girvin, Mankato, Minn.; James E. Lee, G. A. Sawyer and Chas. E. Johnson, Minneapolis, Minn.; Frank A. Ubel, St. Paul, Minn.; Chas. T. Stevenson, Madelia, Minn., and H. W. Johnson, Detroit, Minnesota.

Rochester Optical Society

The regular meeting of the Rochester Optical Society was held Tuesday evening, September 20th.. President Bestor called the meeting to order with ten members present. The minutes of the last regular meeting, held June 14th, were read and approved.

Mr. Arrington's motion that the regular meeting of the society be held every second Tuesday of each month, instead of the third Tuesday of each month, and which was carried over from the last meeting, was acted upon and carried.

Mr. Bissell moved that a committee be appointed to draw up a code of ethics for the members of this society. The motion was seconded by Mr. Bliss and carried. The president appointed on this committee Messrs. Bausch, Bissell and Clark.

Mr. Arrington moved that an invitation be extended to Dr. Conloy to read a paper before this society at some future meeting. The motion was seconded by Mr. Clark and carried. Mr. Kirstein was delegated to extend the invitation in behalf of the society.

A general discussion then followed as to the best plan for carrying on the work of the society for the coming winter, each member being called upon to give his views, and many valuable suggestions were made, which will be acted upon.

Minnesota State Optical Association

The Minnesota State Optical Association will hold its annual meeting in the Commercial Club rooms, St. Paul, the second week in October. The educational feature of the meeting will be a series of two lectures by Dr. Chalmers Prentice, of Chicago, which will certainly prove a drawing card. An invitation is extended to all optometrists of the State, whether members or not, to attend these lectures. Secretary Snell will be pleased to send programmes of the meeting to any one on request. As this meeting will be a preliminary to arranging for the American Association meeting next year, a big turnout should be present.

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The Use of the Hand Camera

THE hand camera is one of the joys of the age in which we live. It is now an almost necessary companion not only of the pleasure seeker, traveler and men of leisure, but of all, in whatever sphere of life, in whom Mother Nature touches a responsive chord. As a great number of our readers are interested both in the sale and use of hand cameras, they will read with profit the following practical article on the use of these cameras by Rev. H. Mudie Draper, in the *Practical Photographer:*

It is quite a mistake to imagine that because it is easy to use a hand camera, therefore it is easy to take successful photographs. Hand-camera work, to be satisfactory, demands considerable skill and knowledge.

Choice of Camera

Hand cameras may be classed as follows: 1. Magazine cameras. 2. Roll-film cameras. 3. Cameras fitted with dark slides. Magazine cameras are so fitted and arranged that they will contain a number of plates, which by a mechanical contrivance are removed to another part of the camera when exposed, a fresh plate coming into position when one has thus been stored away. The great advantage of such a camera is that a number of plates may be carried within the camera, and exposed one after another with a minimum of trouble, the diadvantages being that sometimes plates refuse to change, something having gone wrong with the mechanism. There is also a liability of scratching the plates when the changing operation takes place, although both these disadvantages may be minimized with care.

Roll-film cameras are fitted with two rollers turned by a key from the outside. The film being wrapped on one, is unwound from this and wound upon the other roller after exposure has been made, a figure appearing through a little red window at the back of the camera showing when the fresh portion of the film is in correct position. Of all the methods of changing the films or plates this is the simplest. It is certain in its action, and the films taking up but little room, the camera can consequently be made much smaller and more portable. By the use of a roll of black paper which forms a kind of support to the film, a spool of films which has been exposed may be removed from the camera in daylight and a new spool inserted without recourse to the dark room. The chief disadvantage is that development of roll films is a much more difficult operation than the development of plates.

Many hand cameras are fitted with dark slides in which the plates or cut films are carried. They are a little bulky to carry, and the changing cannot be done so expeditiously as by the above methods, but they are open to none of the objections described above, and plates of varying speeds may be carried to suit the exigencies of the case.

Magazine and roll-film cameras are not unusually fitted with a ground-glass screen at the back. Some method is therefore necessary to ascertain the position of the picture on the plate. This is done by the use of view finders fitted in the front of the camera. They are usually about an inch square, and give on a small scale a picture of the view upon the plate. In some cameras a focusing screen is so fitted that a full-sized image may be seen right up to the moment of exposure. By an ingenious mechanism the focusing screen closes up when the shutter is released.

Some hand cameras have a "fixed focus," i. e., all images beyond a certain distance are in focus. In others a focusing arrangement is attached, distances being indicated by a scale and pointer fixed on the outside of the camera. The disadvantage of the former is that no object nearer than the fixed distance can be photographed; the disadvantage of the latter is the difficulty of judging distances correctly. Both these disadvantages are eliminated by the use of a camera with full-sized finder as above described.

Films vs. Plates

The great advantage of using films is to be found in their lightness and portability. Four dozen films weigh less than a dozen plates, and take up no more room. Moreover, they can be printed from either side, a great advantage in carbon work. They are, however, much more expensive than plates, and are not so easy to develop. The chief disadvantage of plates is their weight, but they require less skill in development, therefore the percentage of successful photographs is much larger if they be employed.

The Lens

The cheaper hand cameras are fitted with single lenses; those more expensive with R.R. lenses. A single lens is no use where buildings are to be taken, as it does not render straight lines correctly. A single lens is to be preferred for landscape and portraiture. Spend your money on the lens and get the best lens your pocket can afford. It is quite easy to be misled by a showy instrument got up for sale, containing a very indifferent lens. Test the lens before purchasing a camera. To do this, open the shutter, take out the plate carriers and insert a piece of ground glass the same size as plate. Cover your head and back of camera with focusing cloth. Your picture will then be projected on the ground glass, and the definition and covering power of lens seen at a glance. Note at the same time if the view in the finder is identical with the view on the ground glass.

Selecting Camera

1. See if the focusing scale be true; this is often faulty with cheap cameras fitted with a focusing scale. The way to test this is to mark off along the pavement distances from the camera as given on focusing scale. Insert the ground glass in the camera, as above described; set the scale to the nearest distance, and note if the objects at a similar distance on the pavement are in focus; do this with all distances marked. If all are in focus the scale is correct; if not it needs to be re-marked.

2. Carefully test plate-changing arrangement if the camera be of the magazine variety. It is annoying to get a plate jammed when far away from a dark room. Load up the camera with used plates of right size, then carefully change each one; do this several times and see if the mechanism acts rightly. One plate at a time should drop and no more. (Advisable to do this occasionally before using camera to test if the mechanism is still in order).

3. Plates are often fogged because the camera is not light-tight. To test—close the lens, open the back, take out plates and carriers. Throw the focusing cloth over the head and camera; hold the camera up to strong light for some seconds. If any stray light is coming in it will be apparent.

Fittings to Hand Camera

1. Shutter.—Usually hand-camera shutters are too fast, hence under-exposed plates; one-twentieth of a second is quite fast enough for all ordinary work. If plates are under-exposed take means of slowing the shutter.

2. Level.—Sometimes one sometimes two levels are supplied. These are very convenient adjuncts to hand cameras. (Annoying to find on development that the picture is spoiled because the camera was not held level).

3. Some of the better class of hand cameras are fitted with a rising front. This is a great advantage, as it enables one to get in the tops of buildings without tilting the camera, which is fatal to perpendicularity, unless a swing back be provided, which is rare in hand cameras.

Never attempt to take a time exposure with the camera held in the hand. The result is nearly always a failure. Thoroughly master all the workings of your instrument before you take it out to photograph. Try all the working parts, and make yourself absolutely familiar with them before you expose a plate. An hour spent indoors with your camera will save much time and trouble afterwards. If yours be a magazine camera, the operation of loading is most important.

(*Continued on page* 1685)

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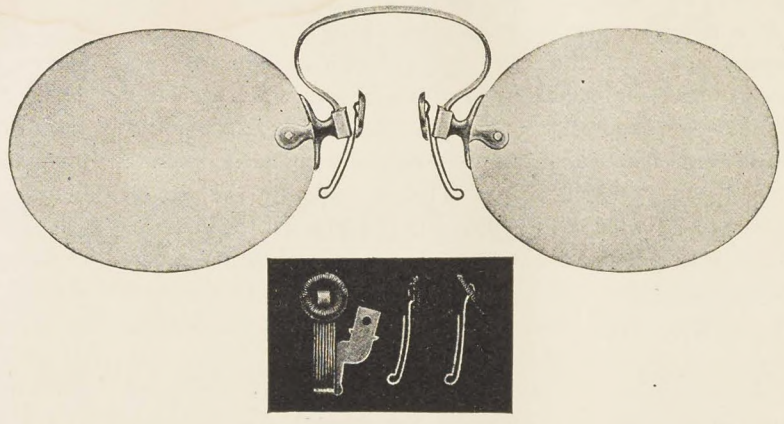

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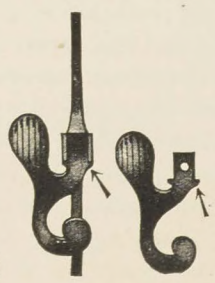

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OPHTHALMOSCOPY

(Continued. Part VI)

This serial is the well-known exposition of the principles of ophthalmoscopy and the practical use of the ophthalmoscope, which forms one of the chapters in Dr. Tscherning's celebrated treatise, "Physiologic Optics," which can be had from this office on receipt of the price, $2.50 (10s. 5d.)

Ophthalmoscopic Examination of the Refracting Media.—To examine the transparency of the refracting media it is preferable to use a weak illumination; we use preferably a plane mirror or even a convex mirror. De Wecker recommended the use of the plates of Helmholtz for this examination. We see, indeed, the shadows which the opacities produce by intercepting a part of the rays sent back by the fundus of the eye. If the fundus is strongly illuminated, and if the obstacles are not completely opaque, they allow a part of the light to pass and the shadow is less complete.—It is useful to use a strong magnifying glass for this examination in order that we may place ourselves very near the eye. Otherwise many of the small corpuscles may escape in the examination.

It is quite rare for these obstacles to be visible by the light which they themselves reflect. It may happen, however, that we can see the red color of hemorrhages situated far forward in the vitreous body, or the white color of certain opacities, especially when using the light in such a manner that it falls very obliquely along the head of the observer. In case of synchisis scintillans the observing eye receives light regularly reflected by the surfaces of the small crystals situated in the vitreous body.

Skiascopy.—This method of examining ocular refraction was discovered by Cuignet, who described it under the ill-chosen name of keratoscopy. It was Parent who specially developed the method, and it was he who first gave the correct explanation of it.

The observer takes his place at one meter from the patient, whose eye he illuminates with a plane mirror; by rotating the mirror around a vertical axis we see the luminous spot on the face of the patient move in the same direction. The illumination of the pupil follows the same direction, whether the patient be hypermetropic, emmetropic or very slightly myopic.—If the myopia is over 1 D., the pupillary light is displaced in the contrary direction, and if the myopia is equal to 1 D., we do not see the light move in the pupil. The luminosity diminishes uniformly in the entire extent of the pupil to disappear suddenly.

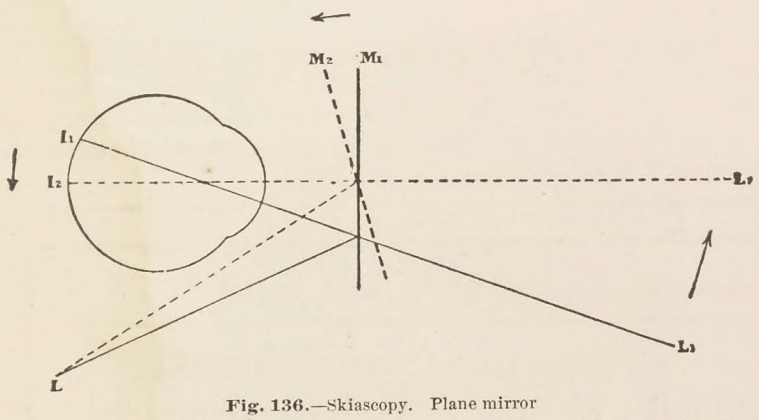

Fig. 136.—Skiascopy. Plane mirror

L, lamp; M_1, first position of the mirror; L_1, image which it forms of the lamp; I_1, retinal image.—M_2, second position of the mirror; L_2, image of the lamp; I_2, retinal image

The examination of figure 136 shows that the retinal image moves in the same direction as the mirror. If the observed person is hypermetropic, emmetropic or myopic less than 1 D., it is the erect image that the observer sees. The light seems to move on the retina, as it really does. If, on the contrary, the myopia is greater than 1 D., he sees the light move in the contrary direction, because the light comes to him from the inverted image which he observes.—To determine the degree of ametropia, we place before the eye of the patient stronger and stronger glasses, until the shadow covers the entire pupil at once; the patient has then a myopia equal to 1 D.

If we use a concave mirror, we see, as in the preceding case, the luminous spot move on the face of the patient in the same direction as the mirror. But the retinal image of the flame moves in a contrary direction: we see, indeed, on figure 137, that the image of the flame (L_1 L_2) formed by the mirror goes in a direction contrary to that of figure 136, whence it follows that it is the

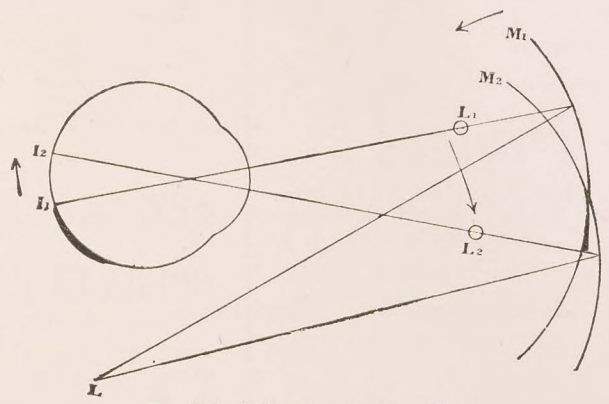

Fig. 137.—Skiascopy. Concave mirror

The letters have the same signification as in figure 136

same for the retinal image. The observer also sees the ocular glow move in an opposite direction if the observed person is emmetropic, hypermetropic or myopic less than 1 D. and in the same direction if the myopia is greater than 1 D.

Skiascopy is important in the search for astigmatism if we do not dispose of it with an ophthalmometer. If the mirror be moved in the direction of one of the principal meridians, everything happens as in a non-astigmatic eye. But if the movements of the mirror take place in another meridian, the shadow is seen to move in a direction which forms an angle with that of the mirror. This is due to the elliptical form of the diffusion spot. If we draw an ellipse with oblique axes on a sheet of paper, and observe it through a smaller circular aperture, while giving it a horizontal movement, is almost impossible not to give way to the illusion that the motion takes place in an oblique direction.—We then find the motion to give the mirror in order that the displacement of the ocular glow takes place parallel to that of the mirror. We then determine the refraction of the principal meridians in the ordinary way.

When the ametropia is considerable, the glow is quite feeble and the boundary between the light and shade is curved. If on the contrary the eye is almost corrected, we see the glow very bright and its border is very nearly straight.

[TO BE CONTINUED]

Spectacles for Use in Shooting

Mr. W. W. Watts, of London Sporting Park, Hendon, London, N.W., has recently patented an invention which has for its object an improved form of spectacle, or the like, adapted to be used by sportsmen and riflemen to enable them to take aim accurately with one eye whilst the view of the other, in the direction of the barrel and object aimed at, is more or less obstructed. It is well known that many men have one eye rather stronger than the other, and if this eye happens to be the left they experience trouble in taking aim with the right eye when firing a gun or rifle from the right shoulder.

The spectacles forming the object of this invention may be plane and without glass, or they may be provided with lenses as is usual, according to circumstances. The novelty consists in the provision of a small piece of wholly or partially opaque material in the left hand upper corner or center of the left eye frame of the spectacles.

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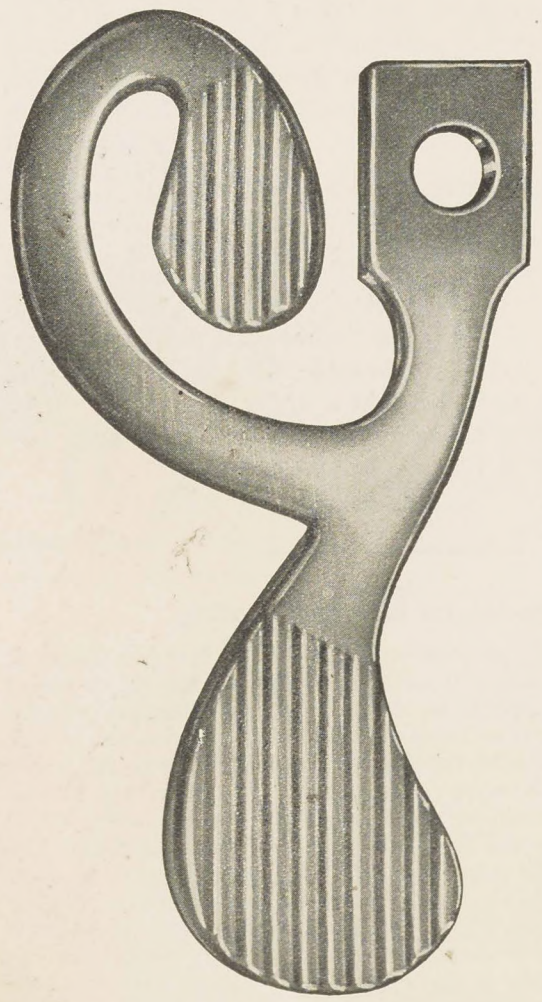

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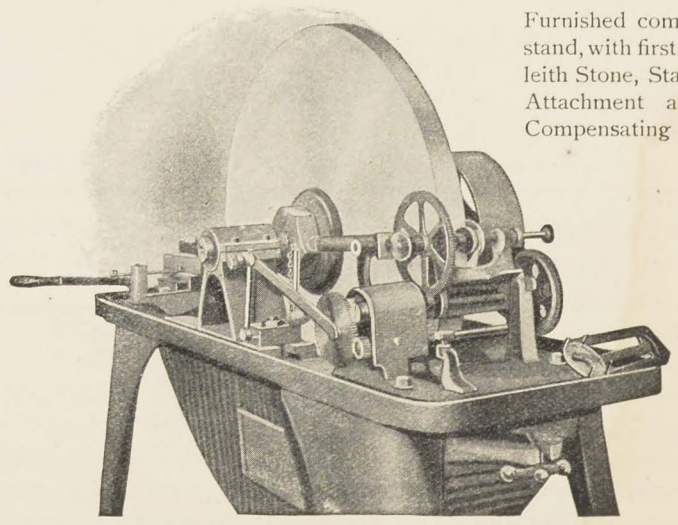

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The Use of the Hand Camera

(*Continued from page 1681*)

Plates jamming are more often caused through careless loading than through defect in mechanism. Put in each plate separately, and carefully notice if the first is in its correct position. Dust all plates before putting them into the camera; dust also back and front of carriers, and occasionally dust out the interior of camera. Carry the camera carefully, avoid swinging it about, and avoid jars, or dust will settle on the plates and a plentiful crop of pinholes on the negatives will be the result.

In the Field

1. Never point the camera directly towards the sun, or the result will be that you will get a "flare spot" on your negative, and it will be spoiled. The image of the sun should never be seen in the view finder; if this be remembered, pleasing effects may often be obtained by working against the light. Most of the so-called "moonlight effects" are obtained in this way.

2. It is not often advisable to have the sun directly at the back, so often recommended to hand-camera workers, as the result will be a flat picture lacking light and shade.

3. The best position for all-around work is to have the sun either on the right hand or the left, then light and shade will be delineated, and these go much towards making a successful picture.

Holding the Camera

The amateur will probably discover for himself how best he can accomplish this. The usual method is to press the camera against the chest, and do not breathe while the shutter is being opened. I sometimes tuck the camera under my left arm.

1. It must be held perfectly steady, the slightest jar being fatal. Although you can take a snapshot of an express train at full speed without showing any movement, yet the slightest movement of the camera will spoil the photograph.

2. The height at which the camera should be held will vary with the object you are about to portray. A good height for most subjects is from three to four feet from the ground. If too high an undue proportion will be given to the foreground; if too low nothing but foreground will be obtained.

3. Press the button, pull the string, or move the lever of the shutter gently. Don't strain it or jerk it, or you will blur the image. This is especially to be remembered when the shutter is working at a slow speed.

4. Hold the camera upright and level; the "level" will help you do this. On some finders vertical and horizontal lines are ruled, and are useful. See that buildings, etc., are upright. Nothing looks worse than a lop-sided building. Do not tilt the camera unless it be provided with a swing back. If tilted upwards, buildings, etc., will appear to be toppling forwards. This fault is often seen in hand photographs.

Concerning Photographic Lenses

To forestall an accusation of prejudice, or the envy of inability to possess, let me say that I am the owner of two most excellent anastigmats, one of over 17, the other of 9 inches equivalent focus, and that as I like to possess things that are beautiful, especially when they are examples of the highest degree of human handiwork, I would not exchange them for ten times their cost if they could not be replaced. It will be understood, therefore, that in writing what follows I do not mean in the slightest degree to undervalue the modern flat-field lens, as for scientific and certain other purposes it is pre-eminently useful.

The Modern Anastigmat

In dealing with lenses now, however, I wish to do so solely in their relation to pictorial work, with more than half an inclination to exclude architecture; and therefore it will be no surprise when I say that I take issue with the two catch sentences, "It's all in the lens" and "ninety-nine per cent. of camera value is in the lens," in the advertisements of two of the makers of lenses that for scientific and certain other purposes are second to none. The modern anastigmat, although it has reached a degree of perfection beyond which it seems hardly possible to go, may be said to differ from the ordinary lens (and under that title I include all the lenses, both single and double, that preceded it so long as they were as far as then possible corrected for chromatic aberration and with the chemical and visual foci coincident) in only three qualities; flatness of field with equal definition all over the plate: more perfect definition; and a larger working aperture or greater rapidity. But it differs also in price, costing very much more, a fact that urges me to give the comforting assurance that for purely pictorial purposes the cheap lens is as good, and for some of them better than the dear one.

And first, as to definition. The days of the sharp picture are gone, diffusion, either by putting even the cheaper lenses slightly out of focus or by other means, having taken its place; and with the recognition of the value of diffusion came also the recognition of photography as a means of picture making. We are told that one element of the pictorial is the accentuation of the objective point or principal object of the composition and the subduing of all else, and surely that is easier accomplished with a lens admitting of partial focusing than with one that insists on equally perfect focus all over the plate. Again, in street work the round field lens has a decided advantage. Here unequal focusing is not desired, and with the flat-field lens the buildings on either side are more or less blurred, while that with the round field gives them more as they are wanted.

Rapidity in Picture Taking

On the question of rapidity the anastigmat has the advantage, but does the true pictorialist care for that? I opine not. A doublet working at f-8 or a single lens at f-16, with the rapidity of the modern plate will do all that he can want, the "breaking wave" and the "moving shadow" being quite within their compass, anything faster showing "arrested motion" rather than giving the appearance of and suggesting action.

Be not discouraged, then, you with the shallow purse. The single lens for all landscape work, and the doublet where there are straight lines, will, if you know how to do it, make in every respect as good pictures as with the same knowledge you could make with the far more costly anastigmats. Although I possess, as already said, two splendid anastigmats and am proud of the possession, my best pictures, those which have been honored in more salons than one, were all made with a single lens, of 16-inch focus that cost only $14.40.

—James Thomson, in Amateur Photographer.

How to Prevent Artificial-Light Developing Paper from Curling

Lay out blotters. On these place muslin from which starch has been washed out, and keep the muslin for just this purpose. Take prints from the wash water and lay face down on the muslin. When prints are just dry enough so that films will not adhere, and yet while quite damp, they are rolled, film out, around a roller 1½ to 2 inches in diameter. Then a small rubber band is placed around each end and the roller removed, leaving a circular form of the roller prints. All are prepared in this manner, and they are allowed to become stone dry while in this shape, thus allowing the pores of the gelatine film to stretch. The rubber bands are then removed, and if necessary three or four prints at a time are rolled *the other way* around the roller to make them lie flat. Having been stretched while drying, they will not curl again. When heavy paper with smooth surface is used curl the ends of the print backwards before placing on the roller, to prevent marking across the face of the print.

—Milton Wade, in Amateur Photographer

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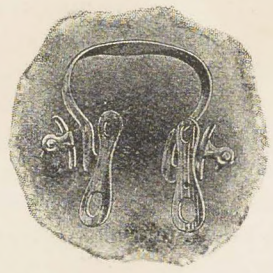

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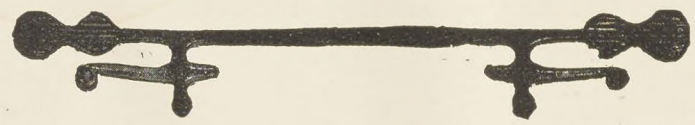

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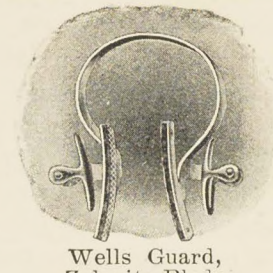

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A Case of Over-Correction of Convergent Squint Without Operation

By Samuel Theobald, M. D., in the *American Journal of Ophthalmology*

CASES of over-correction of convergent squint following operative procedures, though less common nowadays than they once were, are not so rare as to make them noteworthy; but instances of a well-marked inward squint being converted into an outward squint, simply through the influence of glasses, are certainly very uncommon. And so it has seemed to me worth while to place upon record a case of this character which recently come under my observation.

Interesting Illustrative Case

Master E., a lad, twelve years of age, was first seen January 30, 1901, when he was brought to my office for advice regarding the condition of his eyes. There was a fixed and marked convergent squint of the right eye, and there was given a history of asthenopia. The squinting eye was found to be decidely amblopic (V. = $\frac{20}{100}$), and the sight of this eye could be improved but little by glasses. A test under hyoscyamine, made the following day and repeated the day after, showed the total refractive error and the vision of each eye to be as follows:

L. eye + 3.25 sph. ⊃ + .50 cyl. ax. 85° V. = $\frac{20}{25}$
R. eye + 3.50 sph. ⊃ + .50 cyl. ax. 95° V. = $\frac{20}{30}$—

In accordance with my usual practice, I should have urged tenotomy, and should not have thought it worth while to attempt a correction of the squint by glasses alone; but, as a year previously I had succeeded in correcting with glasses a periodic convergent squint in a younger sister of the patient, I concluded to try the same method with him. Accordingly, after the effect of the cycloplegic had passed off, the following glasses, which somewhat over-corrected the manifest hypermetropia, were prescribed for constant use:

L. eye + 2.50 sph. ⊃ + .50 cyl. ax. 85° ⊃ prism 2°, base out.
R. eye + 2.75 sph. ⊃ + .50 cyl. ax. 95° ⊃ prism 2°, base out.

Effect of the Glasses

The patient was seen about a week after getting these glasses, when there was no appreciable change in the position of the squinting eye. Nearly two years elapsed before his next visit. He had worn his glasses systematically and, in spite of the fact that the left lens had become misplaced, the base of the prism having been turned toward the nose and the axis of the cylinder to 95°, he had been free from asthenopia. As shown by the cover test, there was still, with the glasses as he had been wearing them, a slight residual convergent squint of the right eye, the vision of which was unchanged.

As a result of a re-examination of his refraction, this correction for constant use was prescribed January 5, 1903:

L. eye + 2.50 sph. ⊃ + .75 cyl. ax. 75°.
R. eye + 3.50 sph. ⊃ prism 3°, base out.

He was not seen again, except to show me his glasses a few days after they were ordered, until December 29, 1903, nearly twelve months afterwards. He had worn the glasses constantly, and had been free from asthenopia. There was now with the glasses on, and this was confirmed by the cover test, an evident *divergent* squint of the right eye. In view of this, his lenses were changed as follows:

L. eye + 2.25 sph. ⊃ + .75 cyl. ax. 80°.
R. eye + 3.25 sph.

Progress of the Case

These about corrected the manifest refractive error in each eye, and gave for the left eye V. = $\frac{20}{25}$ —, and for the right eye V. = $\frac{20}{60}$ —, indicating a slight improvement in the sight of this eye. With this correction, the right eye was disposed still to squint outward, though at times there seemed to be binocular fixation in distant vision. After ten days the right eye was found to be still squinting outward and, what was more remarkable, this outward squint persisted even when the glasses were removed. A month later (February 5, 1904) there was no change in the position of the eyes in distant vision, but the cover test seemed to indicate a disposition to binocular fixation in near vision. He had, besides, suffered somewhat with headache after reading, which I thought due, probably, to an effort to establish binocular fixation. March 9th, with his glasses on, there was still a divergent squint of the right eye in distant vision, and most of the time in near vision; though occasionally there seemed to be binocular fixation in near, especially in reading.

By the vertical diplopia test, and with a red glass before the left eye, there was at 20′ an "exophoria," if it could be called so, of 10° to 11°, and at 12″ of 4°. Without glasses the right eye, as before, squinted outward in distant vision; and when the left eye was covered, and he fixed with the right eye, the squint shifted in the usual manner to the covered eye.

Interesting Features of the Case

This case seems to me to possess several features of interest. In the first place it shows very strikingly how great an influence glasses exert at times over the position of a convergently squinting eye. In the next place it illustrates the pronounced indisposition to binocular vision which, as we all have had occasion to observe, exists in certain strabismic individuals. In some instances the difficulty in establishing binocular fixation, whether by the aid of glasses alone or by operation supplemented by glasses, is doubtless due to the amblyopia of deviating eye; in others to a slight uncorrected upward or downward squint of this eye; but in not a few it can be attributed only to a lack of disposition to fuse mentally images formed upon corresponding retinal points. This last-mentioned condition, probably, was a factor in my case; at all events, there was no vertical deviation, and the amblyopia, though marked, was not excessive.

Another noteworthy feature was the persistence of the upward squint when the quite strong glasses which the patient was wearing were removed. This would not have been so remarkable if he had made no attempt to obtain clear vision by accommodative effort; but even when he was induced to distinguish small letters at 20′, no change in the position of the deviating eye could be observed. Probably a change in this regard would have occurred had the glasses been left off for several days. Should the squint not disappear within the next few weeks, it is my intention to reduce further the strength of the spherical correction; and I am not without hope that in this way I shall be able eventually to secure binocular fixation.

As an addendum, it may be of interest to mention that the periodic squint in the case of the patient's sister, who when first seen was but five and a half years of age, was corrected by the following glasses:

L. eye + 4.25 sph. ⊃ prism 2°, base out.
R. eye + 4.25 sph. ⊃ prism 2°, base out.

These were subsequently changed to

L. eye + 4.25 sph.
R. eye + 4.50 sph.

with which she has, at the present time, not only comfortable binocular vision, but practically normal muscle balance. A favorable feature in her case was the existence of acute vision in the periodically squinting eye.

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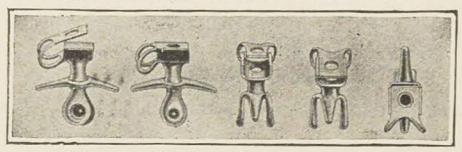

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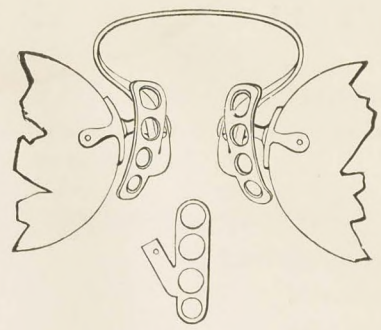

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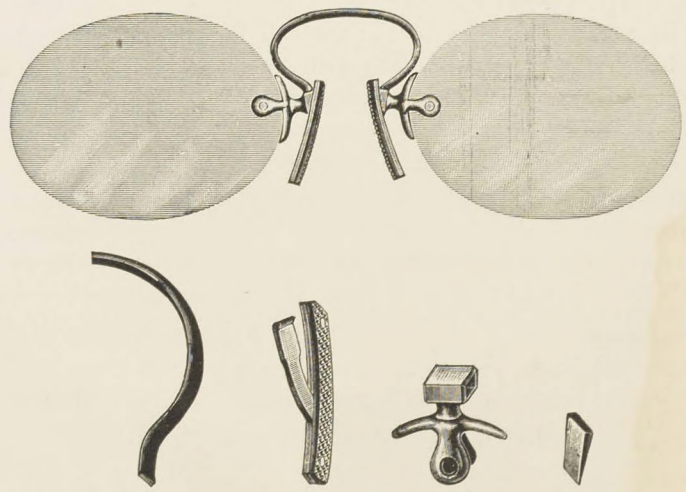

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Dr. Francis Valk, the well-known author of a popular book on the "Errors of Refraction," has supplemented that work by a volume of about 160 pages, published by G. P. Putnam's Sons, in which he considers all the theoretical and practical questions regarding latent and fixed squint. His views may be said to be more those of an eminently practical man than of a philosopher, but they all rest on a good empirical basis and his advice is generally excellent. The new volume can be heartily recommended to any reader who would like to become acquainted with the most recent views and treatment of squint. It can be had from THE KEYSTONE on receipt of publisher's price, $1.75; by mail, $1.90. We reprint here a few paragraphs from the second chapter regarding the movements of the eye.

It is an easily demonstrated fact that the eye must remain perfectly still in any one position when the function of vision takes place, and as a corollary to that we might say that the eye is practically blind when moving from one position to another, inasmuch as no images can be formed on the retina as the eye moves from one point of regard to another. Dodge says "the field of clearest vision is practically a point, namely, that point at which we are looking;" but I should be inclined to designate this point as a region whose extreme boundaries, though not perfectly defined, would form an angle with the nodal point of the eye of about four degrees, and all objects lying within this region will be clearly and distinctly seen. At the same time, this region seems to have a central point which tends to regulate and control the fusion of all images and the fixation of the eye. This is the point at which the visual line ends, as it is extended through the nodal point from the object looked at. Now this region of most distinct vision is evidently that of the *macula lutea*, or yellow spot, but is more or less extended on the retinal field, and in space, at a distance of one foot from the nodal point of the eye, will include a region of about one inch in diameter. Within this region vision is perfectly normal at the reading distance.

It is very evident, then, that the eye could have no continuous motion from one side of the page to the other; that is, from left to right, but must pass by little jerks, as it were, and periods of rest, from one point of regard to another, so that as we read a line across the page the eye is practically at rest much longer than it is in motion. Similarly, we have the very interesting experiment of Stratton, as to the movements of the eye in following a curved line, like a circle. Here the movements of the eyes were very irregular, but always passing from one point of regard to another by rapid movements and minute periods of rest, as described above, he says, "this path by which the eye passes from one to another of these resting places does not seem to depend very nicely upon the exact form of the line observed," it is extremely irregular in outline, whether the object, as a curved line, be artistically made or very irregular. The same interesting movements take place even when the eye is moved from point to point in space, but the movements of rest are so slight that the retinal impressions do not reach the higher centers of the brain, unless the impressions be very sharp and vivid. To illustrate this, if we stand in a darkened room and look at the electric spark of the static machine at a distance of six feet, and then slowly move the eyes from right to left, we will see a series of minute bright spots, with dark spaces appearing between them about two or three mm. apart.

It must be evident from this that the eye during its excursion from right to left must have made a series of minute stops sufficiently long to allow this intense image to be formed on the retina and so conveyed to the brain, also that no image was formed while the eye was in motion, as shown by the dark spaces between the brilliant spots. These phenomena have been long observed by some of our investigators in the field of physiological sciences, and during the past two years have been more fully investigated and proved by means of a reflection from the cornea and a photographic plate.

Raymond C. Dodge, Stratton and others, have made many investigations in these interesting phenomena, by photographing a bright reflection on the cornea, as the eyes are moved in reading, or as the look passes from any point of regard to another. If we attempt to pass the look slowly from one point to another, so as to see clearly all the objects that may be present between these two points, and another person closely watches the eye movements, or a photograph is taken of the reflection from a bright spot on the cornea, it will be seen that the eye has made several rapid movements and stops from point to point across the field of motion. This cannot be done introspectively, as we are not conscious of these movements of the eyes any more than we are of the similar movements of fusion in the act of binocular vision.

My conception of this physiological act is that the movement of the eyes from one point of regard to another is purely a voluntary one, controlled by the higher brain centers, while their action in the fusion of the images according to physiological law is controlled by the lower or automatic brain centers.

Furthermore, under this voluntary movement of the eyes, as the look passes from one point of regard to another, sufficiently far apart, we are practically blind during the period of transition. In other words, we are not conscious of any object in the line of movement, though we may know that the most sensitive part of the retinal field must have passed the rays of light from such objects. It is true that we may be conscious of these objects, but unless we were familiar with their appearance we could not tell what they were; consequently, when the eyes pass from two distant points, say ten feet from the eyes, and separated fifteen feet, we see the two points clearly, but not the intervening objects; and if we attempt to move the eyes slowly between these two points, so as to see all the objects between them, the eyes will make a number of stops and rapid movements of which we are totally unconscious.

Dodge has proposed five type of eye-movements in the horizontal meridian, as those of Fixation, Pursuit, Co-ordinate compensation, Reactive compensatory, and lastly, Unique movements, which seem to me are the movements of fusion. The first three are very important in connection with this study, and show how extremely delicate and perfect is the adjustment of the visual line by the action of the muscles of the eye. The first type, Fixation, are reactions to eccentric retinal stimulation that seem to be dependent on a physiological function from birth and are not influenced by voluntary effort. The second, Pursuit movements, are the involuntary movements of the eye as we look at an object from a moving train, in which the "line of regard seems to lag behind the line of interest and to overtake it from time to time by short eye movements of the first type." The third type is of interest as showing the constant fixation of the visual line while the head is moved slowly from side to side.

Rudolph Panse, Archives of Otology, on Vertigo: says, "We judge of the position of objects laterally by the degree of ocular movements, which in turn is determined by the amount of innervation supplied to the muscles. This estimation takes place through nervous processes of which we are unconscious. If the ocular muscles should be weakened the necessarily increased innervation, for its movements gives the impression of a greater excursion."

Virginia State Optical Association

The annual meeting of the Virginia State Optical Association was held in Richmond, Va., on September 9th. The first session was called to order by President A. F. Jahnke, Jr., in the office of Rudd & Buchanan, at 6 P. M. President Jahnke made a brief address, reviewing the work of the past year. The reports of various committees were heard with much interest, especially that of the legislative committee, read by the chairman, V. B. Gilbert, who reviewed at length the work of the committee and association as a whole along legislative lines. Captain E. B. Thomanson was unanimously elected an honorary member for the excellent service rendered the association on different occasions.

W. Wayt Royall

The officers elected for the ensuing year were: W. Wayt Royall, of Martinsville, president; Dr. A. Weck, Norfolk, vice-president; John W. Buchanan, Richmond, secretary; G. Leslie Hall, Norfolk, treasurer; C. H. Rudd, Richmond, chairman executive committee, V. B. Gilbert, Richmond, chairman legislative committee. A banquet furnished by the Richmond members to the out-of-town members was given at Rueger's cafe, and was much enjoyed by all present.

There will be a call meeting held in Richmond in February that will be the best the association has ever had, if interesting papers and a large attendance will make it so. It is expected that every present member of the association will attend, as well as a great many new ones.

To THE KEYSTONE, W. Wayt Royall, the new president of the Virginia State Optical Association, has communicated the following:

"Allow me to say through your valuable paper that if the unaffiliated opticians of Virginia knew what they were missing by not joining the association, they would soon be on the inside. If they will only reflect on what the medical and dental associations have done for their respective professions, they will see very clearly that the optical association is destined to prove very useful.

"We intend this year to increase the membership to double the present number, and to this end I would urge every optician in the State to at least send us his name and address, so that we may let him know some of the advantages of membership. And we wish he would do so now, as we want a large attendance at our big meeting to be held in Richmond, Va., in February, 1904."

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Death of McLelen Parr

A prominent member of the Western optical trade passed away in the person of McLelen Parr, manager of the Denver, Colo., branch of the Columbian Optical Co., who, some weeks ago, succumbed to tuberculosis. Mr. Parr was born at Lebanon, Ind., in September, 1864. He resided in and about LaFayette until 1888, and then went to Rock Island, Ill., where he remained until 1890, at which time he came to Denver, Colo., and connected himself with the Geneva Optical Co.'s establishment in that city. He remained with this concern until 1892, when, with others, he founded the Columbian Optical Co., at 1649 Champa Street.

McLelen Parr

The company continued business there until January, 1903, when larger quarters became necessary. The business was accordingly moved to 624 Fifteenth Street, where Mr. Parr had fitted up one of the neatest and best arranged optical stores in the Middle West. He was manager of the company's establishment at Denver, Colo., until his death; vice-president of the Columbian Optical Co., of Kansas City, and president of the Columbian Optical Co., of Salt Lake City, Utah, and had also a number of other interests that required his attention.

He was an aggressive business man, and enjoyed the esteem of all who came in contact with him. His business aptitude and industrious spirit manifested themselves all through his career, and his reward was duly forthcoming.

The File in Optical Work

The use of a file is such a simple matter, that many who handle it for optical repairs scarcely ever consider whether the stroke which they use in filing a flat surface is one which gives the best results. Usually, in filing, the tool is thrust forward and drawn back again, always being pressed on to the material which is to be reduced. If this material were tested after the stroke, the surface would not be found flat—the edges would be lower than the central portion, because it is on them where the file grips most, and consequently cuts best. For finishing off a surface perfectly flat, the stroke of a file must be forward only, the tool being held exactly parallel to the proposed plane, brought down on to the article near the tip, and thrust forward, being raised from the metal at the end of the stroke, without tilting it up or down in the process.

The value of these few details will be evident to anyone who has to cut down a screw which projects from a joint both head and shank. By a backward and forward movement the joint itself is sure to be marked, but a careful operator will file nearly down to it without marking the surface. To make a thoroughly good job of a new screw it will be better to remove it, to smooth the shank end, and then before it is quite turned home, to give a slight dressing to the head, using the file in the method recommended.

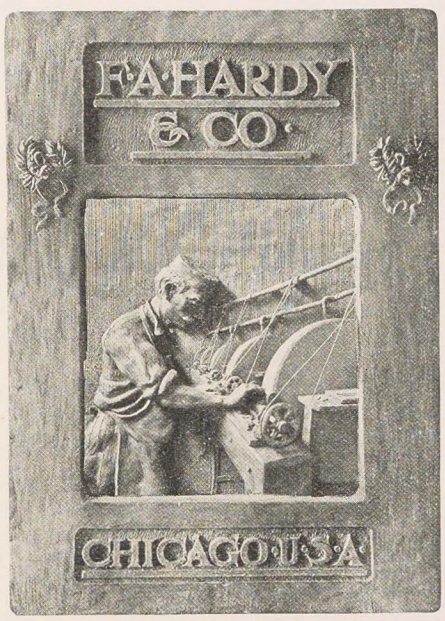
Optical Notes

The patents issued to Dr. Adt, on August 2d, have been added to the "Shur-On" patents now controlled by the E. Kirstein Sons Company, Rochester, N. Y., thus making a very strong combination.

F. M. Swayze, formerly of Swayze Bros., Niagara Falls, N. Y., recently completed a course at the Philadelphia Opticial College, graduating with the degree of Ref. D., and has begun business with all the latest appliances in the Silberberg Block, Niagara Falls.

S. S. Parr, of the Columbian Optical Company, of Denver, Colo., accompanied the remains of his brother, McLelen Parr, to Indiana for burial, August 27th, returning by way of Kansas City, and paying the Columbian Optical Company's office there a short visit. A. I. Agnew also accompanied the remains to the place of interment, returning by way of Omaha, where he paid a visit to the company's office in that city, lasting a few days.

F. A. Hardy & Co., wholesale and manufacturing opticians, Chicago, have issued the fifteenth edition of their price-list and general catalogue of spectacles, eyeglasses, lenses, testing apparatus, opticians' tools, etc. This is a handsome and exhaustive compilation, with an artistically modeled cover design, reproduced herewith in miniature.



The catalogue is copiously illustrated and embraces every feature of opticians' and oculists' supplies. In the opening pages directions are given for writing prescriptions for lenses and frames, and there is a carefully arranged telegraphic code for ordering lenses. Adequate and concise descriptions are given of all goods, and the price tabulations are carefully compiled. On the inside back cover there is a detailed index, and this is reenforced and the referential value of the book increased by a general index conveniently printed on the edges of the leaves and comprehensible at a glance. The book abounds in information of interest and value to the optician, and will make an exceedingly useful addition to his business library.

Free sample pages of lectures and lessons of the Correspondence Course in Optics will be mailed to readers of THE KEYSTONE on application to The National College of Optics, Cedar Rapids, Iowa. Ask for special rates. —*Adv.*

The South Dakota State Optical Association

The second annual meeting of the South Dakota State Optical Association was held at Sioux Falls, S. Dak., on August 26th. A good attendance and much enthusiasm marked the occasion. The following officers were elected for the ensuing year: President, W. H. Fritz, Sioux Falls; vice-presidents, Guy Livingston, Yankton, and R. D. Horton; treasurer, H. D. Gebhart, Flandreau; secretary, D G. Gallet, Aberdeen. An executive committee of three members, a legislative committee, a convention committee, a committee on membership, and trustees of the defense fund were to be announced later by the president.

W. H. Fritz

President Fritz, Secretary Gallet and Treasurer Gebhart have proved themselves the right men in the right place, and it is largely through their efforts that the association is now on so good a footing. The membership list has more than doubled in the first year and applications are coming right along. Secretary Gallet says he has still lots of application blanks on hand and every optician in South Dakota should send for one if not already a member. In union there is strength, and we prophesy before another year rolls around that there will be very few non-members. The next meeting will be largely educational and all should avail themselves of the first opportunity to become members.

Pennsylvania Optical Society

The annual meeting of the above society will be held in Parlor 1, Continental Hotel, Ninth and Chestnut Streets, Philadelphia, on Tuesday evening, October 11, 1904. The programme will be as follows: 8 o'clock—Annual business meeting and election of officers. 9 o'clock—Discussion on the subject, "How can our Association be of the Greatest Advantage to those Members who Live too far away to Attend our Meetings." Also letters on the same subject from absent members. 9.45 o'clock—Refreshments.

Kentucky State Optical Association

The executive committee of the above association are preparing to make its semi-annual meeting, which will be held at Winchester on Tuesday, October 18th, one of the most successful gatherings in the history of the organization. A number of interesting and instructive papers will be read, and the question and answer system, which was a feature of the last meeting in Louisville, will again be adopted. The proceedings will be brought to a close with a banquet.

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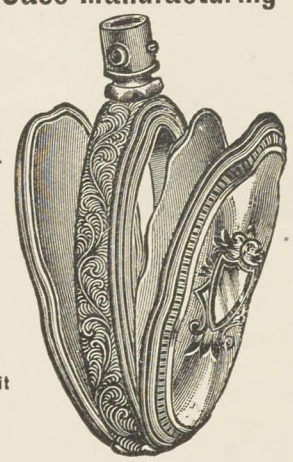

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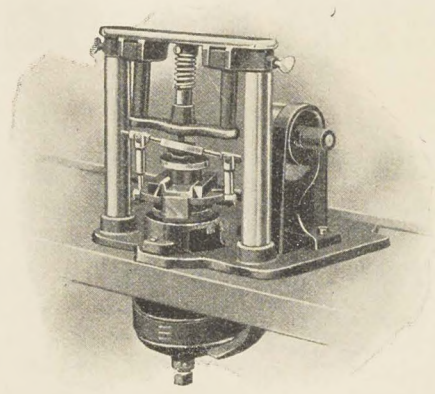

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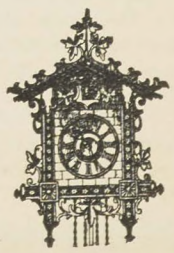

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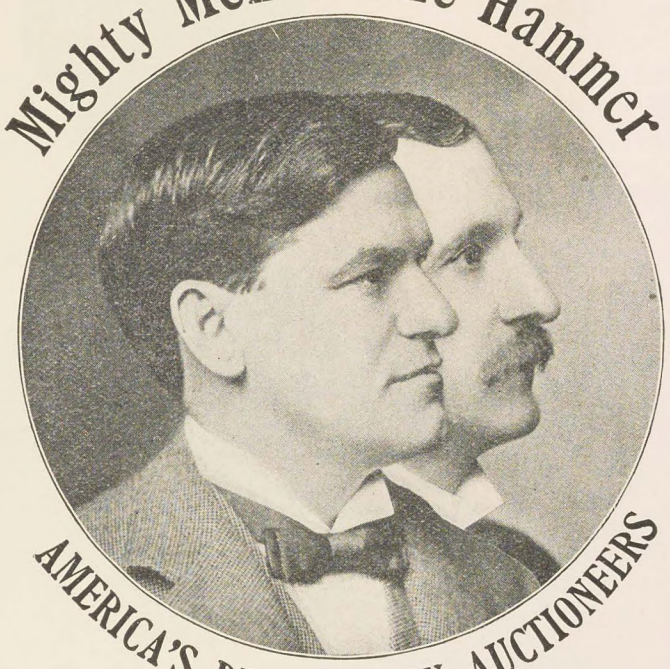

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Chas. W. Crankshaw, Atlanta, Ga.
Geo. W. Biggs & Co., Pittsburg, Pa.
A. M. Hill, New Orleans, La., 2 sales.
Pairpoint Mfg. Co., Chicago.
A. Stineau, Cincinnati, Ohio.
Jos. W. Field, Galveston, Texas, 2 sales.
Roth Importing Co., Denver, Colo.
Albert Feldenheimer, Portland, Ore.
C. E. Buhre, Topeka, Kans.
H. J. Young, Joliet and Kankakee, Ill., 2 sales.
Sumner Bros. & Co., Cleveland, Ohio, 4 sales.
Geo. W. Myers, Meriden, Miss.
Geo. W. Kennedy, Des Moines, Iowa.
W. F. Main Co., Iowa City, Iowa.
S. H. Ives, Detroit, Mich.
R. E. Samson, Marion, Iowa.
Oscar Heinze, Quincy, Ill.
Lange Bros., Dubuque, Iowa.
Geo. Clark, Lorain, Ohio.
F. B. Lewis & Co., Cleveland, Ohio.
P. E. Kern, El Paso, Texas.
J. P. Stevens & Bro., Atlanta, Ga.
G. A. Schlechter, Reading, Pa.
Slides & Co., Owensboro, Ky.
C. D. Gardner, Manistee, Mich.
John B. Miller, Portland, Ore.
A. Schwaner, Beaumont, Texas.
J. M. Washburn, Celina, Ohio.
Cutting & Wilson, Winona, Minn.
W. H. Kelly, Carrollton, Mo.
W. E. Smith, Bellefontaine, Ohio.
L. Kaminiski, St. Louis and Galveston.
T. G. Burkhardt, Jefferson City, Mo.
Fussy & Blair, Missoula, Mont.
Geo. W. Meyers, Chattanooga, Tenn.
M. Zimmerman, Jeffersonville, Ind.
C. W. Ernsting, Gallipolis, Ohio.
W. A. Kirkham, Leavenworth, Kans.
Ash & Dembunger, Tacoma, Wash.
Barnett & Nonnenmacher, Columbus, Ohio.
A. M. Goldman, Seattle, Wash.
Lyon & Kylling, Danville, Ill.
M. Waunch, San Francisco, Cal.
Woodward, Smith & Randall, Colorado Springs, Colo.
Wilbur, Lanphear & Co., Galesburg, Ill.
Harry Harrison, Sault Ste Marie, Mich.
Sands & Fellows, Cedar Rapids, Iowa.
Leonard Krower, New Orleans, La.
W. K. Lippit, Norwich, N. Y.
W. J. Kelly, Oshkosh, Wis.
Ritter & Ryan, Muncie, Ind.
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M. Greer, Iowa City, Iowa.
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Sipe & Sigler, Cleveland, Ohio, 5 sales.
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H. Simon, St. Paul, Minn.
Rodgers & Pottinger, Louisville, Ky.
Hanna & Eroe, New Castle, Pa.
D. H. McBride & Co., Akron, Ohio, 3 sales.
H. Koester & Co., Detroit, Mich., 2 sales.
H. Kline, Seattle, Wash.
J. L. Sievert, Springfield, Mo.
A. W. Ford, Freeport, Ill.
S. H. Dodge & Son, Ypsilanti, Mich.
C. F. Baldwin, St. Joseph, Mo.
David Goldberg, Helena, Mont.
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Bonner Bros., Fort Worth, Texas.
Hart & Sturgis, Houston, Texas.
Carlton Jewelry Co., Kenosha and Racine, Wis.
Stewart & Prescott, Dallas, Texas.
Parmlee Bros. & Co., Los Angeles, Cal.
Clemens Hellebush, Cincinnati, Ohio.
P. H. Lachicotte & Co., Columbia, S.C.
Harry McIntyre, South McAlester, I. T.
Geo. Chantler, Manistique, Mich.
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Mermod-Jaccard Jewelry Co., St. Louis, Mo.
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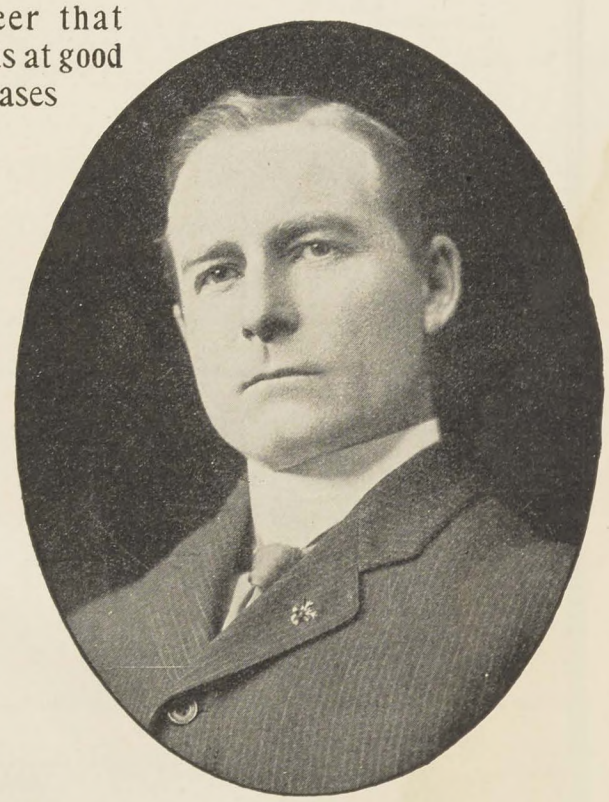
The Auctioneer that sells your goods at good prices and pleases all customers as well

Have been selling for the established trade for over twelve years. Fall is a good time to have your sale. Reference from any of the jobbers of Kansas City and from jewelers all over the United States. Write me full particulars and my advice will cost you nothing. I work as cheap as any other *good* man.



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COL. J. D. LEWIS, America's Leading Auctioneer

For the Established Jeweler

Office—1032 Silversmiths' Bldg., CHICAGO, ILL.

My 27th Year

Write for terms, date and new method for conducting sales. Correspondence confidential

No stocks too fine or large for me to handle at a fair profit. References from the best Jewelers in the country

F. W. BROMBERG
MANUFACTURING AND RETAIL
JEWELER
107 N. 20TH STREET

COL. J. D. LEWIS. Birmingham, Ala., February 21, 1904.

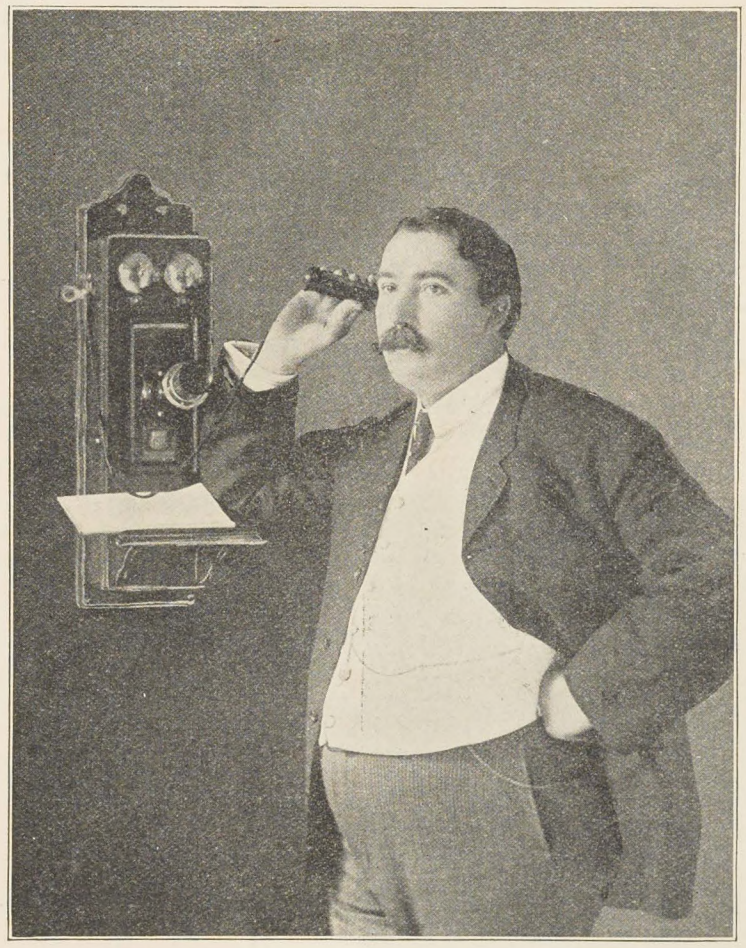
Dear Sir:—I want to express my appreciation of your successful efforts in conducting my remodeling auction sale from February 10th to 20th. I am more than pleased with the results as you realized a fair price on every old piece of goods in stock and proved that a successful sale could be had in this city without filling in any new goods, which has always been said could not be done.

You sold Howard and Vacheron & Constantin Watches, Chests of Silver and Sterling Silver Tea Sets as easily as the smallest article. Proving yourself at all times a gentleman, hard worker, sober and honest, and selling more goods in four days than sold in fifteen days' auction sale for me in January, 1901. With your new method of conducting a sale, you had packed houses at each sale and kept the audience entertained, making new customers instead of driving away old ones. You deserve the reputation which you have of being the best auctioneer, especially when a jeweler wants no misrepresentation and to remain in business. With best wishes, I remain, Yours very truly, F. W. BROMBERG.

$157.000

Ten Sales

$157.000



A Message From America's Leading Auctioneer

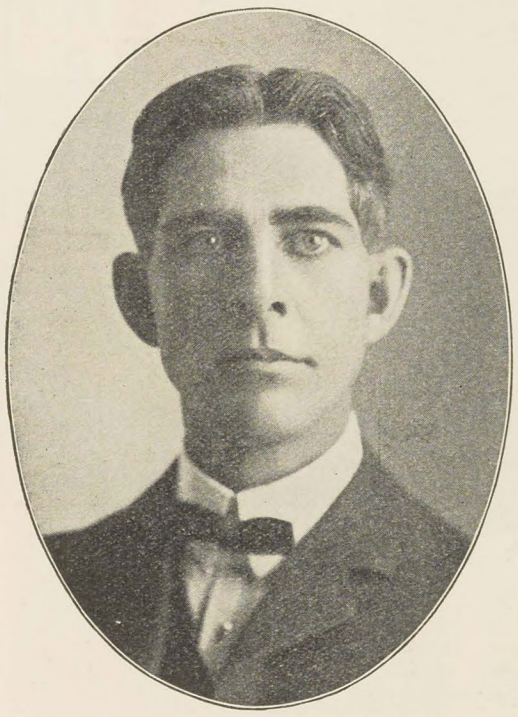
HELLO! HELLO!! Yes, this is

R. M. HARDING

The Auctioneer

Yes, I have lately closed a successful seven weeks' sale for Geo. E. Feagans, Joliet, Ill. I made this sale in the months of July and August. What's that? Yes, a fine store—stock $75,000. Oh, yes; another, the L. L. Berens sale at Bellingham, Wash. It was a fine sale for June. Good stock, $25,000. Yes, I safeguard your reputation and you will stand just as high in the community as a result of my holding a sale for you. Auctions as conducted by my method are business building and money making. Listen to what Geo. E. Feagans has to say regarding my method of conducting a sale. "Harding, this sale has brought hundreds of new people into the store, who I believe will continue to come to us for their needs in our line." Yes, I am booking sales now for fall and winter. Yes, that's it, decide this matter as soon as possible. I am corresponding with other jewelers. Good-by.

Address R. M. HARDING, 156 Wabash Avenue, CHICAGO, ILL.
PACIFIC COAST OFFICE—206 Kearny St., San Francisco, Cal.



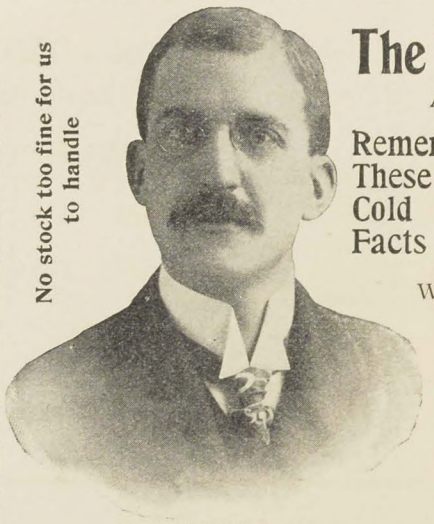
Throw your chest out

brace up—this is the time to get busy. Hold an auction sale and let me conduct it, either on a division of the profits or the percentage plan, and you will make more money than you ever did before. There is no guess work or experiment about it, for I have conducted more successful sales for jewelers, made more money for jewelers, and am acknowledged to be the safest, best and most reliable auctioneer for jewelers. Wouldn't you like to have me explain fully my guaranteed profit plan? It's the only plan for a conservative jeweler to consider.

JOHN H. RAVEN

Holland, Mich.

No stock too fine for us to handle



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We will make your sale, and will **positively guarantee** that our **new method** will produce the required results. We refer reliable jewelers to the following firms whom we have served; their verdict should say, "we are your auctioneers."

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Mermod & Jaccard Jewelry Co., St. Louis, Mo.
L. G. Call, Waynesburg, Pa. (2 sales)
Hess & Slager, Jacksonville, Fla. (2 sales)
Mrs. Ellen Mercer, Birmingham, Ala.
H. S. Lilius, Hattiesburg, Miss. (2 sales)
A. M. Cook, Laurel, Miss. (2 sales)
Schaul & May, Atlanta, Ga.
A. M. Nelson, Colorado City, Colo.
V. D. Morris & Co., Mt. Pleasant, Iowa. (2 sales)
A. S. Harshbarger, Girard, Ill.
Frank Hooper, Denver, Colo.
Rosenblatt & Co., Greensboro, N. C.
A. L. Desbouillons, Savannah, Ga.
Laurel Jewelry Co., Laurel, Miss.
J. P. Bader, Clarksdale, Miss.
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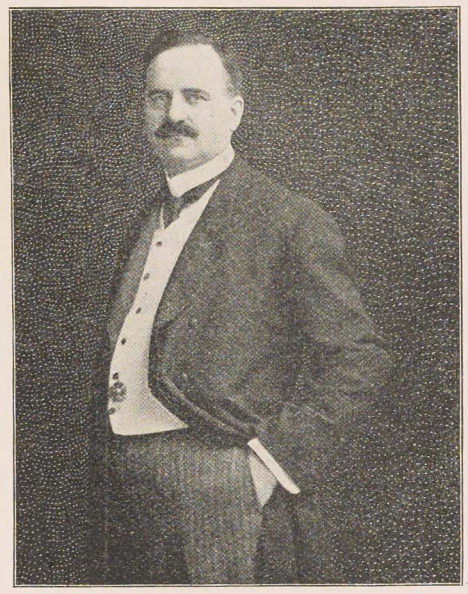

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To the Jewelry Trade

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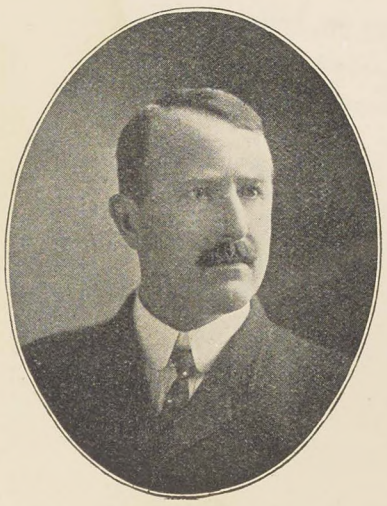
New York

M. J. WELLER



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DO YOU REALIZE that an Auction Sale will

1st.—Clean up your stock and turn your slow sellers and undesirable goods into money?
2d.—Stimulate your trade and arouse public interest in your stock and store?
3d.—Furnish you with the cash to purchase new and attractive goods at right prices?
4th.—Draw to you many new friends and customers and retain all the old ones?

DO YOU CONTEMPLATE reducing your stock or retiring from business?
DO YOU WISH TO KEEP ABREAST OF THE TIMES and employ the latest and most approved methods in conducting your business?
DO YOU NEED THE MONEY? Write for my new and original plan of conducting sales. It has never failed to attract and hold an audience, to arouse public interest and spirited competition and to **REAP RESULTS.** I guarantee a net profit at the close of each day's sale.
If you want a legitimate **reduction or closing-out sale,** honestly conducted, write me.
All correspondence confidential. The best of references furnished.

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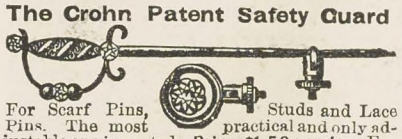

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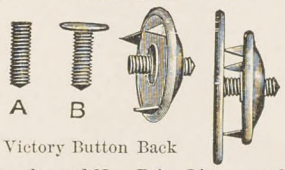

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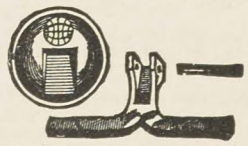

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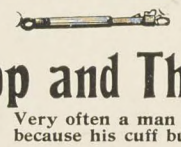
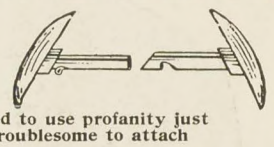


Stop and Think



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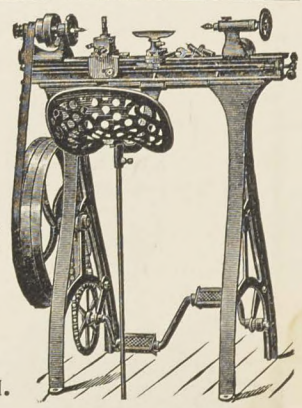

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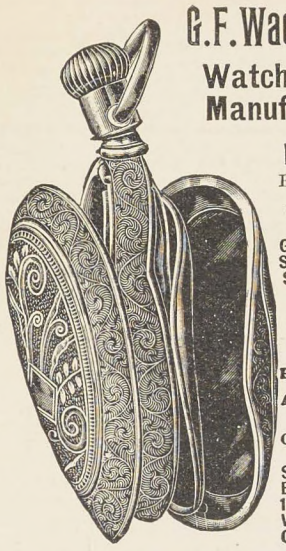

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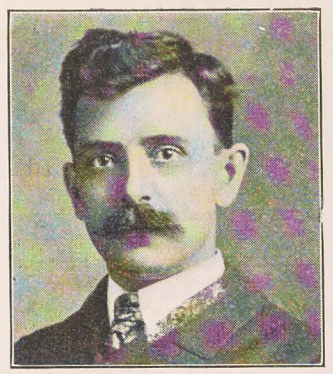

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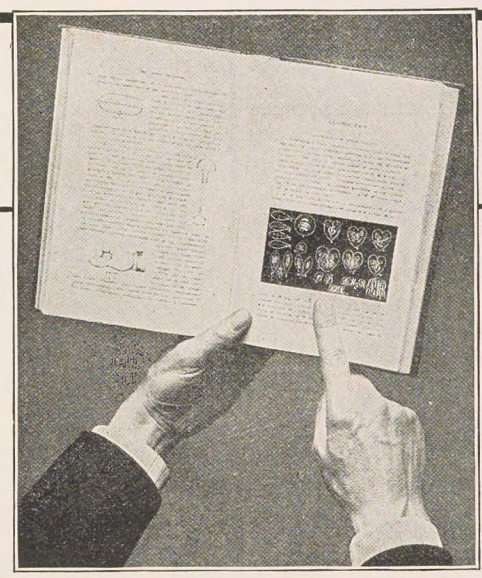

There's at least one branch of handicraft we do not lead in. A firm in this city has found it necessary to ask the Treasury Department for permission to import heraldic engravers under contract. They can't find anyone sufficiently skilled in this country—at least anyone out of employment.

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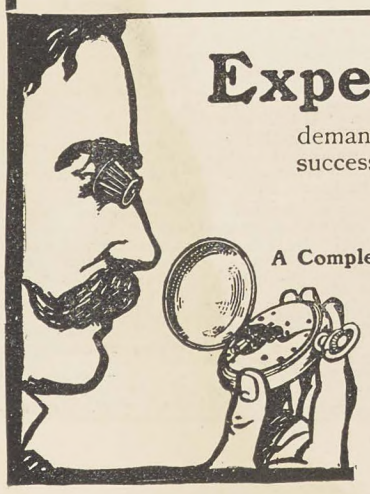

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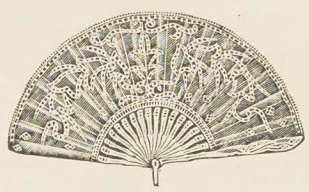

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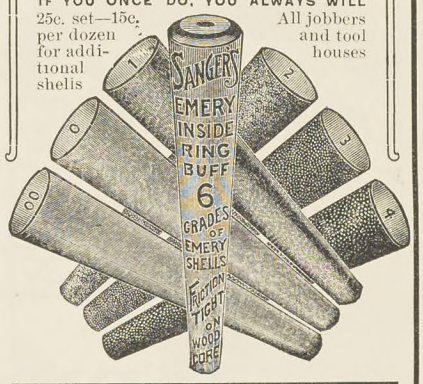

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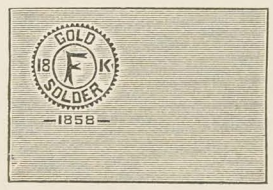

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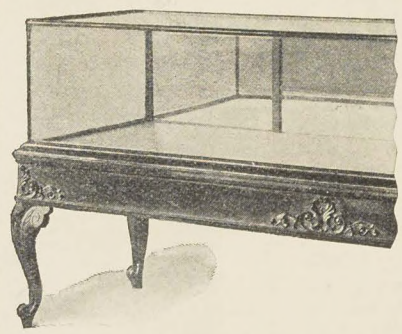
Front Building. Top Floor

Jewelers' Show Cases



Our Small **ROSEWOOD** MOULDING **STEEL LINED CASE**

We Challenge the World to Produce a Better Case

F. C. JORGESON & CO.

208-210 West Lake St.

CHICAGO

Makers of all Kinds of

Jewelers' Fixtures

Write for illustrated circular

OUR MOTTO: The Best of Everything

Established 1839

CROUCH & FITZGERALD

Jewelry Sample Trunks and Cases

Extra Deep Trunks and Cases Always in Stock

161 Broadway, Below Cortlandt Street
688 Broadway, Below Fourth Street
723 Sixth Avenue, Between 41st and 42d Streets

NEW YORK

When writing to advertisers, kindly mention The Keystone

Small Advertisements

No advertisement inserted for less than 25 cents.

Under heading "Situations Wanted," ONE CENT per word for first twenty-five words. Additional words and advertisements, THREE CENTS per word.

Under all headings except "Situations Wanted," THREE CENTS per word.

Name, address, initials and abbreviations count as words, and are charged for as part of the advertisement. No display other than two-line initial letter.

To insure insertion money must accompany all orders for advertisements, and copy must reach us not later than the 25th of each month for insertion in the following month's issue.

If answers are to be forwarded, TEN CENTS in postage stamps must be enclosed.

The real name and address of every advertiser must accompany the copy of the advertisement.

Advertisers who are not subscribers must send 15 cents (special issues 25 cents) if they desire a copy of the paper in which their advertisement appears.

Address,

THE KEYSTONE,
19th & Brown Streets, Philadelphia, Pa.

SITUATIONS WANTED.

Under this heading, ONE CENT per word, for first twenty-five words. Additional words and advertisements, THREE CENTS per word. No advertisement inserted for less than 25 cents.

A BOOKKEEPER (lady) desires permanent position or several sets of books to post and balance. Can furnish excellent ref. Address, "W 434," care Keystone.

SITUATION wanted by engraver and watchmaker, also by engraver who is willing to learn something about jewelry business, keep stock in order and sell goods. Address, "K," 1119 Masonic Temple, Chicago.

SITUATION wanted by lady engraver, willing to sell goods and keep stock in order. Address, "K," 1119 Masonic Temple, Chicago.

YOUNG man, good habits and best refs., having lathe and small tools, desires position as watchmaker. Pennsylvania pref. Address, "D 438," care Keystone.

GOOD watchmaker, engraver, jeweler and optician. Age 31, married; good habits; own lathe and tools. State salary, also hours; good refs. Box 260, Archbold, Ohio.

PRACTICAL, graduate optician desires steady position to take charge of optical department in New England. Address, "Optician," 19 Perrin Street, Attleboro, Mass.

NOV. 10th, by industrious man; single, sober, 8 years' exp. Age 28. Good watchmaker, plain engraver—no optician; good salesman. Best refs. "S. W. M.," 1615 Virginia Street, Lafayette, Ind.

YOUNG lady wants position as assistant watchmaker, 10 years' exp. Moderate salary. Ad., Fannie H. Barron, Wadsworth, Medina County, Ohio.

SITUATION wanted by good watchmaker, general repairer; can engrave some. Good set of tools, good refs. Address, "Jeweler Special," 528 Jackson Street, Sandusky, Ohio.

AS watchmaker and engraver, used to complicated work, understands the finer adjustments. Capable of taking charge. A1 city refs. "C 442," care Keystone.

POSITION by experienced watchmaker, fair engraver, understand optics. Prefer to be all-around man; own full set of tools. Address, "M 444," care Keystone.

WATCHMAKER, jeweler, plain engraver, 4 years' exp. at bench, 2 years with practical optician. Can wait on trade; speak English and German. Henry H. Schleuder, Springfield, Minn.

SUCCESSFUL refractionist, up-to-date instruments, competent to take charge department. California pref. Refs.; no bad habits. Geo. L. Dietrich, R. F. D. 1, Gardena, Cal.

LADY clerk or buyer for first-class jewelry store. State salary, etc. "B 419," care Keystone.

EXPERIENCED watchmaker, jeweler, optician, neat appearance, not afraid of work, as retail salesman or to take charge of store. Gilt-edge ref. State salary. "D 432," care Keystone.

WATCHMAKER, graduate refractionist, good, plain engraver, good salesman of good appearance, position with house having good optical business. Wishes to change; experienced man. "D 433," care Keystone.

WATCHMAKER, clock and jewelry repairer wants position in Southwestern Texas, New Mexico or Arizona. Six years' exp.: best ref. J. M. Young, Atkins, Ark.

BY A1 watchmaker and good engraver; own all tools. Competent on fine watches. Can furnish best of refs. from present employer. Position must be permanent. Will go at anytime or wait until Jan. 1st. Would go West if position offered was favorable. "B 431," care Keystone.

YOUNG man as watchmaker or assistant, 3 years' exp.; plain engraver. $12 per week; tools, refs., etc. Illinois or Indiana pref. "H 441," care Keystone.

WATCH and clock repairer, 25 years' exp. $6 to $12 per week. South pref. Address, J. W. Borden, Lisle, N. Y.

SITUATIONS WANTED

SITUATION wanted by competent young lady engraver, jewelry repairer and saleslady. Illinois, Michigan or Indiana pref. Address, Illinois College of Engraving, 69 Dearborn St., Chicago.

WANTED, position as watchmaker; can give best of ref. Can do jewelry repairing and some plain engraving. Address, "Watchmaker," 936 Market Street, Wheeling, W. Va.

BY experienced watchmaker, optician and engraver. A1 ref.; 12 years' exp.; state salary. Address, Box 28, Madison, Ohio.

YOUNG man, with lathe and tools, desires a position as assistant watchmaker. G. E. Dail, 2534 North Fifteenth Street, Philadelphia.

ENGRAVER, young man, 19, wants position as letter and monogram engraver and learn jewelry business in Michigan or near. Landis School of Engraving, Detroit, Mich.

YOUNG watchmaker and jeweler, having sold business, tools, etc., wishes position where tools will be furnished. Do some engraving; no bad habits. Plenty of refs. J. A. Schmitt, Bonesteel, S. Dak.

YOUNG man, 24, 5 years' exp. as salesman, watch, clock and jewelry repairer. Strictly honest, temperate and reliable man Go anywhere; New York pref.; A1 ref. "G 422," care Keystone.

WATCHMAKER, jeweler, plain engraver and optician. Attended Bradley Horological, at Peoria, 9 months. Have own lathe and tools, age 24, and can give good ref. Charles Conboy, Pittsfield, Ill.

EXPERIENCED refractionist and prescription man would like position. Can fill both positions with satisfaction, or am open for proposition to take optical department on commission basis. A1 refs. "M. G.," 84 Hickory Street, Rochester, N. Y.

YOUNG lady, experienced, desires position as engraver and saleslady, or in wholesale house. Best of refs. furnished. "C. A.," 1009 Detroit Street, Laporte, Ind.

EXPERIENCED watchmaker, joweler and optician desires steady position at once. Clyde McKelvey, Demos, Ohio.

A GOOD watchmaker and engraver; own lathe, tools, etc. A good, all-around man. Address, F. J. Thurman, 128 E. Second St., Hastings, Nebr.

WATCHMAKER, 14 years' exp., desires a change before Jan. 1st. Address, "K 448," care Keystone.

BY first-class watchmaker, plain engraver, 14 years' exp. Married, refs. New England, Mass., pref. Own tools. "B 440," care Keystone.

15 YEARS a jeweler, watchmaker, plain engraver, optician. Have managed store. Reasonable wages. Could go immediately. Choice refs. Illinois or Indiana pref. E. A. Maxwell, Albion, Ill.

BY first-class all-around engraver—fancy engraving a specialty. Taken a 4 months' course at Philadelphia College of Horology. R. W. Emerson, Florence, Mass.

WANTED, position as watchmaker; have 6 years' exp. Refs. furnished, etc. Address, Box 101, Roxton, Texas.

FIRST-CLASS mfg. jeweler and diamond setter and repairer, 30 years at the bench. State salary in first reply. "L 132," care Keystone.

POSITION in New England or Middle States, by a first-class watchmaker; an all-around man with exp. and tools for high-grade work. State salary you pay. Address, "D 412," care Keystone.

POSITION as watchmaker and plain engraver; experienced in railroad inspection. Have a fair knowledge of optics. Address, Box 124. Carrollton, Mo.

OCULIST, graduate optician, place as expert optician in office or store. Good habits, Can teach or travel. W. R. Clement, M. D., Yukon, Okla. Ter.

BY young man with some first-class retail optical house; do some refracting; 10 years' exp. Can furnish best of refs. "D 397," care Keystone.

BY watch, clock and jewelry repairer; 18 years' exp. Clean stockkeeper. Not afraid of work. Do not engrave. Box 90, Bloomfield, Iowa.

AS letter and monogram engraver by young man who can do good ordinary work. Addres, "B 401," care Keystone.

YOUNG man of exp. will accept position as assistant watchmaker, jeweler, engraver and optician at once. Address, "B," P. O. box 6, Fernandina, Fla. Reasonable wages.

JEWELRY salesman, optician, A1 refractionist and frame fitter, with good appearance. Age 27. Would like position by Oct. 1st. Address, "T 395," care Keystone.

ENGRAVER and salesman, general letter and monogram designer. Young man with good refs. L. K. Burnham, Canisteo, N. Y.

BY first-class engraver in a retail store, as engraver and salesman; 3 years' exp. and best refs. Address, H. D. Whitney, Union, N. Y.

SITUATIONS WANTED

A1 REFRACTIONIST, edge grinder and up-to-date optician. Thoroughly reliable. Absolutely honest. Will buy a business or an interest. Geo. B. Wood, Griffin, Ga.

IN Philadelphia, competent watchmaker; fine workman, good engraver. Ref. of present employer. All tools. If interested write, "Watchmaker," 801 H Street, Northwest, Washington, D. C.

YOUNG man as watch, clock and jewelry repairer, wants position by Oct. 20th. Best ref. South pref. P. O. box 272, Marion, Va.

WATCHMAKER, engraver, jeweler, graduate optician. Have tools. An all-around good man in store. Age 30. Also have medical exp. Refs. Address, "H 340," care Keystone.

WATCH, clock repairer and optician. Forty. 27 years at own bench. $10 per week and board. Wm. F. Newell, Schuyler Lake, N. Y.

WATCHMAKER, thoroughly competent and reliable, wants position where accurate work is appreciated. Will go anywhere in United States. Ad., "C 409," care Keystone.

BY first-class watchmaker. Age 35. Learned trade in Switzerland and has 20 years' practical exp. First-class. Own tools. Good refs. Can do fair engraving. Wages, $18 to $20. S. Kaufman, 319 N. Capitol Ave., Indianapolis.

FIRST-CLASS watchmaker desires position at once. New England States pref. Address, "E. H. B." 45 Charles St., Springfield, Mass.

YOUNG man with good habits. 2 years' exp. as watchmaker, clock, jeweler, optician, light engraving. Can give the best of refs. "S 411," care Keystone.

POSITION as salesman or in office of wholesale house. Thoroughly experienced in jewelry trade from the manufacture to selling of same. Address, "John Smith," room 601 Columbus Memorial Building, Chicago.

AS watchmaker; 3½ years' exp. at bench. Want to learn stone setting, engraving. Would expect instructions in same. Best refs. as to character, ability. Age 19. "E. M.," box 634, Muncie, Ind.

PERMANENT, by competent watch and clockmaker; 9 years' exp. in all classes of work. Fair wages expected. Do not engrave. Northeastern Ohio pref. L. F. Fox, North Lima, Ohio.

YOUNG man with full set of tools desires a steady position as watchmaker and engraver. "H.," 235 Market Street, Emmaville, Pa.

YOUNG man would like position as watchmaker and plain engraver. Will furnish own tools and good refs. Address, Harrie P. Gough, Port Henry, N. Y.

YOUNG man with thorough knowledge of jewelry and optical business, would like position with reputable wholesale house, with chance of advancement for road position. Refs. furnished. "B 417," care Keystone.

HIGHEST-GRADE watchmaker, optician and fair engraver. A life's exp. and best of refs. No small town need apply. Tools and trial case. C. R. Shanar, Knox, Pa.

POSITION as engraver, jeweler and salesman, by young man, age 24. Will furnish samples of engraving and refs. C. F. Morgan, 93 Ashland Boulevard, Chicago.

WATCHMAKER, jeweler, engraver, optician; 18 years' exp. Strictly A1, age 34, good appearance; speak Norwegian and Swede. Southwest pref. "B 427," care Keystone.

WATCHMAKER, engraver, jeweler, optician; 18 years' bench exp. Complete set tools. Open for position where wife can also be employed. She is very fine refractionist, good engraver, saleslady. My exp. enables me to take full charge. "B 428," care Keystone.

HELP WANTED

UNDER THIS HEADING THREE CENTS PER WORD

WANTED, salesmen to carry our beautiful line of jewelry made from the abalone shell found only on the California coast. This jewelry is a novelty that will "go" in jewelry, dry goods and department stores. Popular priced; pays handsome profits to the retailer and a good commission to the traveler. Can be carried as a side line. Write us at once, stating territory you cover. California Pearl Manufacturing Co., Long Beach, Cal.

WATCHMAKER, one who can do some stone setting and act as salesman. Single man pref. Reinel, jeweler, Streator, Ill.

A COMPETENT watchmaker and engraver for Atlanta. Must be fully able to take charge of first-class railroad work. A steady position for an honest and industrious man of good appearance and pleasant manner. $18 at start, and $20 from Jan. 1st. Address, "T 416," care Keystone.

AT once, watchmaker and jeweler. Permanent position for right man. H. C. Bledsoe, Atkins, Ark.

OPTICIAN who can do clock, jewelry repairing, plain engraving and be generally useful about store. Permanent position; moderate salary to competent man of good habits and address. F. A. Fiedler Co., Ltd., Milton, Pa.

HELP WANTED

WATCHMAKER, engraver, jeweler, who can take complete charge of jewelry store in fine Tennessee town of 3000 pop. Must have money to take an interest, or would sell all. Other interests demand our time. "M 439," care Keystone.

WANTED, by a large wholesale house, a man capable of getting up a material catalogue. Only such as are capable need apply. Address, "K 425," care Keystone, with full particulars.

AT once, first-class watchmaker and engraver. We have our own tools. Permanent position at good wages. Ad., W. G. Gilger, Norwalk, Ohio.

AT once, watchmaker, engraver, optician and jeweler. Must be an all-around man with satisfactory refs. Will pay $75 per month, or will give one-half of all repairs and optical work, and furnish everything but tools, with a guarantee of $75 per month. Joe Lucas, Orange, Texas.

WATCHMAKER and graduate optician, fine workman; sober. Only the best need apply. Permanent position to the right man. Salary, $75 per month. Give age, exp., married or single, and enclose refs. in first letter. Newton's Jewelry Store, Carlsbad, N. M.

GOOD bench man, with at least 2 years' drug exp. Must furnish good ref.; good wages. J. B. Large, druggist and jeweler, Ruthven, Iowa.

FIRST-CLASS watchmaker, one who can handle fine watch trade and good salesman. $20 per week to start. Send photo. and refs. in answer. Address, "S 398," care Keystone.

GOOD jewelry repair man and engraver. Motor power, daylight shop. Not holiday job, but steady employment. Salary, $18. Address, "Jeweler," care The W. J. Johnston Co., Pittsburg, Pa.

WOULD some first-class watchmaker and ordinary engraver like to come South? Must be sober, own tools and able to do railroad work. $18 at start; wages raised if everything satisfactory. Refs. exchanged. Fine winter climate. Box 194, Eagle Pass, Texas.

A FIRST-CLASS salesman, engraver and watchmaker. Must be able to handle fine trade and have good habits. Send samples of engraving and refs. with first letter. Position permanent; $24 per week. E. P. Sundberg & Co., 72 Broadway, Fargo, N. Dak.

YOUNG watchmaker and engraver. Tools furnished. Must have A1 refs. Easy work. Fine Illinois department store. "C 400," care Keystone.

RELIABLE young man to assist in watch repairing and make himself generally useful. Wages, $10 a week. H. Ackerman, Marysville, Kansas.

AN engraver wanted in one of the largest towns of South Carolina. One who understands a little about watchmaking pref. H. S. Kramer, 51 Maiden Lane, New York.

AN experienced traveling salesman for jewelry. Address, "N 390," care Keystone.

WATCHMAKER, jeweler wanting permanent position, write to M. E. Grimes, Statesboro, Georgia.

EXPERIENCED watch and jewelry salesman wanted to travel Pacific Northwest. Steady position; good prospects to right man. State refs. Address, "H 449," care Keystone.

AN experienced surface grinder and all-around man. Respective: a man who is capable to run a first-class prescription and manufacturing plant. Give full particulars, and how much wages to start, in first letter. B. Mayer, 211 W. Baltimore Street, Baltimore, Md.

FIRST-CLASS watchmaker; steady position for right man, Zerweck Jewelry Company, East St. Louis, Ill.

WANTED, young lady assistant, country jewelry store. Permanent to right person. Address, Box 443, Milbank S. Dak.

AT once, first-class watchmaker, engraver, who can also act as salesman when necessary, in a jewelry and loan business in a Southern town of 35,000. Only a reliable, steady and sober person need apply, and one who can furnish first-class refs. "M 399," care Keystone.

WANTED, a good clock repairer. Must understand all kinds of clocks. If able to assist in watch work or sell goods, so much the better. Wages, $25 per week. Address, Box 721, Denver, Colo.

A1 WATCHMAKER and optician of good appearance and practical exp., wanted by a Michigan firm. Good salary and steady job to the right man. Address, for particulars, "Jas. Wilkins," room 601 Columbus Memorial Building, Chicago.

WATCHMAKER—State wages, exp., refs. Permanent position. Fred. Clough, Mt. Vernon, Ohio.

YOUNG man for jewelry work, engraving. Good salary. Send sample engraving. Permanent. J. R. Sprague, Newport News, Va.

YOUNG man 25 to 30 years old. Clock, jewelry jobber, assistant watchmaker. Will give good chance to advance on watch work to right man. Particulars first letter. State salary. "F 420," care Keystone.

HELP WANTED

DIAMOND salesman well acquainted with retail trade. Zach. A. Oppenheimer, 68 Nassau Street, New York.

FIRST-CLASS watchmaker, engraver. Good salary. Permanent. At once. E. Randolph, Williamson, W. Va.

$20 PER week, first-class watchmaker and salesman. Permanent position. City 8000. Inclose photo. and refs. S. J. Strickler, watch inspector, Salina, Kans.

CLOCK repairer of not less than 4 years' exp. Must be able to repair all kinds of French and American clocks, and make them practically as good as new. Address, with full particulars, exp., ref., salary, etc., Box 543, Asheville, N. C.

ENGRAVER for spoon work and lettering. Must be first-class general man. Wages, $18 per week. Send sample of work. Address, F. F. Hurd, Denver, Colo.

FIRST-CLASS watchmaker, one who can do fair engraving; first-class job. Good wages and steady employment. Send full particulars and photo. with first letter. Only first-class man need apply. A. I. Shapira & Bro., St. Paul, Minn.

FIRST-CLASS watchmaker, plain engraver, by Oct. 15th to Nov. 1st. Central States. $15 to $18 per week. Exp., refs. first letter. "S 421," care Keystone.

FIRST-CLASS watchmaker, jeweler, engraver and optician. Must be a good, all-around man. Position steady; salary, $18. Pennsylvania town, of 8000, near Pittsburg. "H 452," care Keystone.

WATCHMAKER and engraver, competent man; $18 to $20 per week. Address, with sample of engraving first letter, Herman S. Hewett & Co., Brockton, Mass.

PENNSYLVANIA.—None but good watchmaker, plain engraver, with good habits, need apply. $12 per week. "L 436," care Keystone.

$60 PER month. Must be competent watchmaker, plain engraver; have good refs. and a man that knows his place. Western Pennsylvania. "G 437," care Keystone.

AT once, watchmaker, jeweler and salesman; permanent position to right man. Must understand repairing railroad watches. State age, refs. and salary expected in first letter. Ralph Wickliffe, Arkansas City, Kans.

A GOOD watchmaker and engraver; good wages. Send samples engraving at once. Rudisill Bros., Altoona, Pa.

A1 WATCHMAKER and engraver. Will pay $18. F. C. Bennett, Gloversville, N. Y.

A FIRST-CLASS engraver, one who understands watchmaking pref., to go South. City of 50,000. Good wages to right man. Apply or write, Henry Froehlich & Co., 68 Nassau Street, New York.

AT once, first-class watchmaker, jeweler and engraver. Steady position and good pay to the right man. State ref. and salary in first letter. Address, I. Popkin, Franklin, La.

PERMANENT position for hard solderer and engraver. Competent to engrave inside of rings. Give refs., exp., age and wages desired first letter, please. Walter Starcke, Junction City, Kans.

WATCHMAKER for trade work. Steady job for good man. State salary. Memphis Jewelry Co., Memphis, Tenn.

GOOD reliable watchmaker with tools. Hard solderer. Satisfactory refs. $15 and a permanent position to the right man. Address, "K 430," care Keystone. Middle States.

ALL-AROUND watchmaker and jeweler. Must be first-class engraver. Not afraid to work. Steady position. Salary, $80 per month. Send sample engraving and photo. first letter. J. Beilenson, Helena, Ark.

GOOD salesman, window decorator, to take charge fancy china, cut glass, bric-a-brac department of jewelry store. Refs. State former exp., salary. J. Lowinsohn, Birmingham, Ala.

WATCHMAKER, thorough on ordinary watchwork. State salary and exp. Walter Dunmore, Sterling, Ill.

WANTED at once, first-class watchmaker, jeweler and engraver. Must be efficient in all three positions. No drones need apply. Geo. W. Ellis Jewelry Co., Butler, Mo.

A WATCHMAKER who can do all watch, clock and jewelry repairing. Also attend customer when necessary, and a fair engraver. State age and wages expected in first letter. James Rollins, Loudonville, Ohio.

FIRST-CLASS watchmaker and engraver. One capable of handling good grade work. Good position for competent, steady and reliable man. Send sample engraving and state salary. Smith & Webster, 626 E. Main Street, Richmond, Va.

WATCHMAKER, jeweler. Permanent position. Fair wages. Prefer engraver and optician. State wages when writing. M. F. Conley, Louisa, Ky.

(*Continued on page 1702*)

HELP WANTED

(*Continued from page 1501*)

YOUNG man with some exp. at bench as watchmaker, jeweler to finish under good man. Must be sober, honest, industrious and good salesman. Ref. requested. J. H. Brooks, 505 Garrison Avenue, Fort Smith, Ark.

EXPERIENCED watchmaker and jeweler in Kentucky, with good tools. Refs. and photo. Also young man with 2 to 4 years' bench exp.; a good opportunity to finish up. Address, "M 334," care Keystone.

A FIRST-CLASS watchmaker and engraver, capable of waiting on trade. Apply to A. W. Johanson, 270 Wells Street, Chicago, Ill.

WATCHMAKER, engraver and optician; fine position to right man. E. G. Kemmerer, Wilkesbarre, Pa.

WATCHMAKER and optician at once. First-class workmanship and character. Permanent position, $20. R. H. Brabb, Ypsilanti, Mich.

WATCHMAKER and fair salesman, willing to work. Young Hebrew pref. Write terms and refs. H. J. Gladke, Elmira, N. Y.

WANTED

UNDER THIS HEADING THREE CENTS PER WORD

EVERY kind of gold and silverware, jewelry, watches, platinum. Market value paid. Sent by express or registered mail. Price not satisfactory I will return all articles. J. L. Clark, refiner and sweepsmelter of gold and silver (established 1870), 727 Sansom St., Philadelphia.

GENEVA combined retinoscope and ophthalmoscope. Will pay cash; must be cheap. J. H. Dancy, 94 State Street, Chicago.

JEWELER, with $3000, to take jewelry dept. of a jewelry and optical business. Large N. E. city, well established, doing a good business. Exceptional opportunity to right man. Ad., "M 407," care Keystone.

SECOND-HAND trial case. Box 110, Sta. A, Boone, Iowa.

A FIRM to supply me with goods to sell on commission. Have a fine business, but lack capital to buy goods. 204 Main Street, Carroll, Iowa.

JEWELRY business with good repair trade, or interest, by practical watchmaker, East or South. "B 406," care Keystone.

FIRST-CLASS watchmaker and engraver to take half interest in business established 20 years. Poor health requires this change. C. H. Phelps, Bismarck, N. Dak.

WANTED, an optician and engraver, who has $1000 to $1500 to invest in a paying business in one of the best towns in Idaho. Pop. over 5000. Large mining and agricultural interests insuring good and steady business. Climate excellent. Write to Norris, Alister & Co., 134 Wabash Avenue, Chicago,

CHRONOMETER wanted. I will pay spot cash for a first-class, second-hand marine chronometer. Advise make, condition and rating. George E. Feagans, 110 N. Chicago Street, Joliet, Ill.

FOR SALE

UNDER THIS HEADING THREE CENTS PER WORD

STORES, STOCKS AND BUSINESSES

STOCK of jewelry and fixtures. Invoice $2000; can reduce. Harmon, jeweler, Scottsburg, Indiana.

ELEGANT store; long lease; booming town; Western Pennsylvania. Investigate this. Address, "A 45," care Keystone.

GOOD jewelry stock very reasonable. Will. Barker, Sanborn, Iowa.

OLD-ESTABLISHED business; new, up-to-date fixtures; good town, county seat; pop. 2000. State amount of cash you have. Will pay car-fare if not as represented. Address, "C 391," care Keystone.

THE only jewelry store and repair shop in the wonderful Wenatchee Valley. A full line of watches, clocks, jewelry and optical goods. Must sell at once, as other business calls my attention. Answer quick if you are looking for a snap. C. T. Clingenpeel, Cashmere, Wash.

FIRST-CLASS jewelry and optical store, 10 years in business. Best farmers' town in Illinois, 1100 pop. Stock, fixtures, safe, optical instruments, $2600. Reason, poor health. "V 392," care Keystone.

$1500 BUYS well-established jewelry store in Central Iowa town. Only store in center of rich farming country. Rare chance for some one with this amount of capital. Investigate this quick. "H 396," care Keystone.

AN exceptional chance for a hustler. Old-established, best located store in live town, Central Pennsylvania, can be bought for one-third value—account of failing eyes. Well worth investigating. "K 393," care Keystone.

ONLY jewelry store in Central Iowa town of 800, with fine repair trade. If you want it address, Box 86, Norway, Iowa.

FOR SALE

STORES, STOCKS AND BUSINESSES

$6000 WILL buy my stock of jewelry, china, music and millinery; tools, material, fixtures, two-story brick building, or will sell stock and rent building. County seat, pop. 1500. No other jeweler. Harmon, jeweler, Scottsburg, Ind.

GOOD opportunity if taken soon. Stock, tools, etc., $1600. Western Illinois town of 1100. Can divide stock to suit. Other business demands attention. Good chance. "Y 402," care Keystone.

JEWELRY stock and fixtures in Eastern Iowa town of 5000. Good reasons for selling. Good opening, little competition; write for particulars. "G 394," care Keystone.

DESIRE to retire. Business established 1889. Will sell fixtures alone if necessary, and dispose of stock on the road. Repairing, $125 to $150 monthly; yearly profits, $2000 to $5000; fixtures alone $2500. Complete, $15,000; invoice $18,000. Branch store, $1500; it would be a good stand for man satisfied with $20.00 a week to start. Box 96, Wilmington, Del.

A RARE opportunity. An established jewelry business in a good, thriving, manufacturing town; pop. 25,000. Reason for selling, have other interests. Ad., "R 414," care Keystone.

LEADING jewelry and optical business, Southern Ohio city, 7C00 pop. Rich farming community, big crops. Yearly profits $3600. Clean stock, no chestnuts; handsome store, rent low, competition light. Can reduce to about $3000 by Jan. or Feb. Reason, have store in larger city; can't do justice to both. Books open to inspection; bank refs. Terms, cash or bankable security. Address, "L 413," care Keystone.

PROSPEROUS jewelry and optical business in California. Pop., 25,000 and growing; best location, fine climate; fine store room and show window. Splendid opportunity. Invoice about $6000. Can reduce by Jan. 1st, if purchaser desires. Good reasons for selling. "P 415," care Keystone.

UP-TO-DATE jewelry, optical business; invoice $5000. Pop. 4000; mfg. town, 100 miles from New York City. Repairs, $125 per month; no opposition; rent, $15. Sell for $4000 cash. "E 408," care Keystone.

JEWELRY business, well established; full equipment. Stock to suit. Growing town, central location. Little money, write quick. Kempton, Addison, Mich.

SMALL, but well-paying jewelry business; selling for no fault of business. Good opportunity for good workman with small capital. Invoices $1000. Address, Lock box 305, Crown Point, Ind.

ONLY jewelry store in Illinois manufacturing city of 3000. Low rent. Over $4000 business last year. At invoice only; spot cash; other business. About $2500 required. "C 426," care Keystone.

JEWELRY and optical business in Minnesota; finest kind of an opening. Best reason for selling. Good business and first-class chance to step into same. Light competition; pop. 3500. "A 424," care Keystone.

TO settle an estate. Advertiser will sell assets of old-established retail jewelry business splendidly located in New York City. Assets include stock of high-grade diamond and gold jewelry, tools, fixtures and good-will, and are conservatively inventoried at $48,000. If preferred, advertiser will consider proposition for sale of one-half interest. Annual average sales for past 5 years, $60,000. Good chance for energetic, exp'd. man. "O 429," care Keystone.

OLD-ESTABLISHED jewelry business, town 8000 and 2 railroads, with shop. Good manufacturing town, fine farming country. Store newly refitted and large safe. F. H. Dimmick, Norwich, N. Y.

HAVING closed out our entire stock with the exception of standard movements and filled cases about $700, and optical goods about $80, we will sell these at a discount of 25 per cent. from the lowest wholesale price. This is an opportunity to get your fall stock of desirable goods, so you can make a double profit. Come and see the goods or write us, and we will arrange to send them on approval. Swan Bros., Creston, Iowa.

A JEWELRY store in a live mfg. town of 5500 inhabitants, doing a business of about $5000 per year. If sold at once before I buy my stock for the holidays, I can give one with about $1500 cash a good trade. Address, Box 290, Franklin, Mass.

SMALL but well-paying jewelry business. Selling for no fault of business. Nearest jeweler 14 miles. Geo. Lowell, Kingfield, Me.

OLD-ESTABLISHED jewelry store, city of 9000 pop. Good clean stock. Invoice about $5000. $2000 cash, balance on time. Good security. Can reduce stock. F. J. Kempel, Faribault, Minn.

STOCK, fixtures, jewelry, optical business, about $2500. Satisfactory reasons for selling. Located in Western New York. Address, "G 443," care Keystone.

$2000 WILL buy you an established business paying $2500 per year, in Iowa town of 5000 pop. "B 450," care Keystone.

FOR SALE

STORES, STOCKS AND BUSINESSES

A BONANZA for all-around workman, established jewelry and stationery business. Only store. Growing town 2000. Central Jersey. New stock; invoice about $1200. Lots of repairing. Want to sell by Jan. 1st for cash. Address, "H 447," care Keystone.

$1200 BUYS a jewelry business. Repairs, $1800 a year. Sales fine. Rent low. No opposition. Eyesight failing. Best opening in the United States for a young man. W. S. Klomset, Gen'l Delivery, Evanston, Ill.

BEST-PAYING jewelry store Northern Illinois. Good run of work. Fine fixtures; modern. $4000 if taken at once. Other business. Fine opportunity. Up-to-date city 3500. Address, "D 435," care Keystone.

WELL-ESTABLISHED jewelry business. Bargain. 344 Jennings, Cleveland, Ohio.

AN opportunity for a good letter and monogram engraver to buy an established business paying good income, part cash, balance on time. Sickness, cause of selling. Address, "John Fredericks," room 601 Columbus Memorial Building, Chicago.

MODERN optical parlor, reception room, stock and established business. Best young city in Illinois (30,000). Will take partner or sell entire business cheap. Address, "George Bertram," room 601 Columbus Memorial Building, Chicago.

GOOD-PAYING jewelry business for all-around man, in prosperous Illinois town; inhabitants, 4000. Good connection with surrounding towns to draw trade from. Rare opportunity; will pay to investigate. Good reasons. "H 446," care Keystone.

$3000 CASH buys a first-class, long-established jewelry and optical business. Pop. 5000. Famous health resort for the Northern millionaires. Big run of bench work. Annual business, $6000. Latest and best tools. Polishing lathe driven by electric motor. Watch inspector for Southern road. Store centrally located, next door to bank. 5-year lease at $200; would rent now at $300. Reasons for selling, have made enough to build an electric light plant; have a franchise and contract to light a city, and want to start work Nov. 1st. Address, J. I. Linler, Aiken, S. C.

ONLY jewelry and optical business in best agricultural town of 1500, in Ohio. Made money every year for 25 years. Less than $1000 invested. Rent, $5 per month. Address, "M 451," care Keystone.

JEWELRY store, good Oklahoma town 2200. Invoice, $1500; can reduce. Good business—one other store. Reason, wife's health. Want good location investigate. Don't write unless you mean business. "Jeweler," box 156, Pawnee, Okla. Ter.

GOOD-PAYING jewelry business. Invoice, $1500. Box 146, Vermillion, Ohio.

AN opportunity of a lifetime. An old-established jewelry store in a California city of 25,000 inhabitants, doing a good business, with a very low rent, on the principal business street of the city. Will invoice between $4000 and $5000. Can cut it down to $3000 in two months if necessary. No old stock; fixtures and everything up to date. Address, "H 337," care Keystone.

RETIRING from business. Splendid chance to buy a business and a 6-room cottage for part cash, balance in town property or good fruit farm. Stock invoice, $6500; cottage, $1500. City of 5000 inhabitants. Address, "P 347," care Keystone.

BUY now. Only jewelry-optical store Davis City, Iowa. Receipts till Christmas will pay half. Send stamp for particulars. Halstead.

FOR SALE

UNDER THIS HEADING THREE CENTS PER WORD

MISCELLANEOUS MERCHANDISE AND EQUIPMENT

ENGLE engraving machine, $25. Weintraub, 127 S. Seventh Street, Philadelphia.

IMPROVED hand draw bench, $15; cost considerable more. "B 418," care Keystone.

THREE glass tower clock dials, 3/8 inch thick, 5 feet in diameter; best plate glass, ground on both sides, with black numerals on each dial. Only used for 3 years—good as new. Will be sold reasonable. Peter H. Loeper, Ashland, Pennsylvania.

ENGRAVING outfit: Jenks block, watch cap chuck, Strong's transfer type. Write for particulars. C. Gaide, Fort Wayne, Ind.

AT a sacrifice. A fine plate-glass window show case, rosewood frame. Dimensions of base, 48¼ inches wide, 24½ inches deep; total height, 51¼ inches. Theodore A. Kohn & Son, 321 Fifth Avenue, New York.

60-INCH Welch regulator, fine condition; $10. W. H. Smart, Howland, Me.

DE ZENG'S refractometer at a bargain. Good as new. Write for particulars. J. A. Munchhof, Anderson, Ind.

FOR SALE

MISCELLANEOUS MERCHANDISE AND EQUIPMENT

FINE Swiss independent, ¼ seconds, movements, 18 size, keywinders, also have sweep seconds hand; one Henry Stauffer, gun-metal case, $10; one James Huguenin, Locle, nickel case, $10; one Jules Jurgenson, no case, $15. Suitable for watchmaker's bench. Full ruby jeweled throughout, chronometer balance, Breguet hairspring. Enhaus, 22 Maiden Lane, New York.

AN odd lot of watchmaker's tools, including 2 lathes. Cheap. J. Knowles, Van Buren, Ark.

COMPLETE outfit watchmaker's and engraver's tools, including roll-top bench, lathe, etc. Full list and price on application. Williams, Paxson & Co., 419 Court Street, Saginaw, Mich.

SETH THOMAS regulator, polishing lathe. Ray McCormick, Vail, Iowa.

$15 BUYS a Webster-Whitcomb imitation lathe; nearly new. W. J. Eddy, White River Junction, Vt.

A 1902 EATON-ENGLE engraving machine, complete, in good condition. $25 cash buys it. Address, "H 423," care Keystone.

NEW CENTURY engraving machine, latest model, used but a short time. Complete outfit; attachments for holding all articles, monogram and coffin-plate type. Address, "R 403," care Keystone.

TWO rosewood plate-glass cases and tables, 20 inches high, 32 wide, 10 feet 5 inches long; table, black walnut except legs, $75 for each case and table. N. C. Anstead, Fairfield, Iowa.

$175 WILL buy a No. 2 Olin lathe, with screw-cutting and all other attachments, and a complete set of watchmaker's tools, in good order, invoicing $450. Address, 3205 Oak Street, Kansas City, Mo.

TEN-FOOT oak wall case, cupboard base, practically new, at a bargain. C. C. Breese, McMinnville, Tenn.

AMERICAN traveling trial case, with Loring's ophthalmoscope and retinoscope, all new; also watchmaker's tools, engraving outfit—all in first-class condition, cheap for cash. Address or call, 4631 Frankford Avenue, Frankford, Philadelphia, Pa.

MOSELEY lathe, 1½, 43 wire chucks, bezel chuck, face plate, countershaft, adjustable, and foot wheel; curtain-top cherry bench; 10 wheel chucks; small polishing lathe. Also $225 safe for sale cheap if taken at once. Cock and foot jewels and balance staffs cheap for cash, or will trade for watches complete. A. M. Croll, Negaunee, Mich.

OLD French cello, to close an estate; appraised at $100. Box 303, Pokeepsie, N. Y.

ANTIQUE mahogany clover-leaf table, $8; sideboard, $25, to close estate. Box 303, Pokeepsie, N. Y.

TWO wire bench screens, 1 wall case for repair watches; 1 walnut cane case. J. W. Coatsworth, Galena, Ill.

THE latest model of Geneva retinoscope and ophthalmoscope combined. Highest cash offer takes it. Address, "M 445," care Keystone.

A FINE set of watchmaker's tools, including Webster-Whitcomb lathe, with 21 wire chucks, 2-wheel, Universal head, countershaft and foot wheel; 1 large Stehman lathe for heavy work; 1 Stehman engraving block, ball base and attachments. H. M. Rebert, York, Pa.

A HOLMES time lock, containing 2 fine Howard movements, cost $375, 6 years ago. Will sell or exchange for good chronometer. Albaugh & Son, Hillsdale, Mich.

STEAM automobile, good condition, for $250. Will accept half in diamonds or optical goods. "W 410," care Keystone.

ENGRAVING machine, good order; several alphabets of type; $20. Box 152, Tarboro, N. C.

FINE 8-day marine chronometer, has close rating. Will exchange for C.-I. ophthalmometer. Frank P. Richers, Salem, Mass.

EDISON kinetoscope. Want trial case. Wm. Merrill, Washington, N. J.

FOR SALE OR EXCHANGE

UNDER THIS HEADING THREE CENTS PER WORD

A $45 ORIENT bicycle, nearly new, for screw-cutting iron lathe, or offers. Lock box 734, Belding, Mich.

ONE Buffalo Dental Co.'s gasoline generator, with foot-blower and blowpipe. Address, "R 404," care Keystone.

WHO has got a good bicycle or camera to trade for a $25 outfit of small watchmaker's tools. Address, Drawer C, Park Rapids, Minn.

WILL exchange a De Zeng refractometer and A. Jay Cross skiameter for a 20th Century Hardy or Chambers-Inskeep ophthalmometer. Must be in good condition. My instruments are in good shape. Write quick. John M. McKinney, 147 West Sixth Street, East Liverpool, Ohio.

DO you want a good farm in Minnesota or South Dakota for your jewelry stock? If so, write. Do not care for location, only want stock. Geo. E. Sibert, Reinbeck, Iowa.

SPECIAL NOTICES

UNDER THIS HEADING THREE CENTS PER WORD

MOSELEY makes for moderate money the thoroughly reliable Moseley lathes.

ESTABLISHED optical parlors to let. Profits over $100 per month. Box 191, Sumter, S. C.

WATCHMAKERS' and Jewelers' Employment Agency, Glass Block, Marion, Ind,

WANTED—To supply Moseley lathes to an unlimited number of the men at the bench who have need for thoroughly reliable lathes for moderate money. Your jobber will send new list.

A LIFE scholarship in our college, including diploma and highest degree, for only $7.50. See our advertisement, page 1690, and write for new prospectus. South Bend College of Optics.

WE secure you a man, no matter what kind you want. Watchmakers' and Jewelers' Employment Agency, Glass Block, Marion, Ind.

MONEY loaned to jewelers. Write for information. The Collateral Loan and Banking Co., 143 Euclid Avenue, Cleveland, Ohio.

FOR exchange—All jobbers will exchange the thoroughly reliable Moseley lathes for a moderate amount of money.

IF you want a position or to change position, write us. Watchmakers' and Jewelers' Employment Agency, Glass Block, Marion, Ind.

BUSINESS NOTICES

UNDER THIS HEADING THREE CENTS PER WORD

CASH paid for diamonds, watches, jewelry. Entire stocks bought. Weintraub, 127 S. Seventh Street, Philadelphia.

SITUATIONS wanted by Moseley lathes with workmen who desire thoroughly reliable lathes for moderate money. Your jobber for new list.

YOU are looking for a good, reliable firm to do your watch work. Here is the place. W. K. Sandberg, watchmaker to the trade, 802 Columbus Memorial Building, Chicago.

WHEN you get that new lathe try a Moseley and you will have a thoroughly reliable lathe and for moderate money.

OMAHA, Nebr. We make the best $1 per dozen balance staffs ever produced. Also special staffs for high-grade watches. Send 10c. for sample. Dr. Tarbox & Gordon.

JEWELERS! We will both make money if you stop at our conveniently located place for good rooms while visiting the World's Fair. Am interested and will look to your interests. Call or write Kuhn, the jeweler, 1748–1750 Chouteau Avenue, St. Louis.

WHERE to receive the highest cash price for every kind of gold and silver. Refiner of sweeps, filings, brushings, polishings, everything containing gold and silver. Fine gold, silver, copper for sale. J. L. Clark (established 1870), 727 Sansom Street, Philadelphia, Pa. Send by mail or express; prompt attention given.

ELGIN Horological School, the oldest and most practical school for watchmakers. Send for catalogue to Elgin Horological School, Elgin, Ill.

IF it's a Moseley it's all right.

HAVE you an old English watch case you want changed into American stem-wind? If so, send it to me, and I will guarantee satisfaction. G. F. Wadsworth, Silversmiths' Bldg., Chicago, Ill.

FINE jewelry and watches repaired for the trade. No better workmen living. H. E. Thomas & Co., Wilmington, Del.

WE buy second-hand marine chronometers, no matter how badly broken. Send description and price. Repairing our specialty. Ad., P. O. box 73, Edgar, Nebr.

OPTICIANS, attention! Distant test charts, printed on good, white paper. Fifty copies, 50 cents; 100 copies, 75 cents. Express prepaid. Sample free. Roberts Optical Company, Chicago.

GOLD and silver-plating, satin finish, engraving, engine-turning, everything in the line of watch case repairing. G. F. Wadsworth, Silversmiths' Building, Chicago.

WHY not send me your watch cases that need repairing? Can replace any part of a case. G. F. Wadsworth, Silversmiths' Bldg., Chicago, Ill.

THE Omaha Watch Repairing, Engraving and Optical Institute gives a concise, practical, straight-to-the-point course. If the student is given a practical training he is in the direct line of success. If he is determined to succeed and become an expert workman, and his determination is mixed with brains, there is nothing to prevent his success. We qualify young men for responsible positions by giving thoroughly practical instructions. Our equipment is the best. The instructors are specialists. The course of work is comprehensive and practical. Our graduates are thoroughly qualified to meet the requirements of the business world. The demand for competent workmen is greater than the supply. Write for prospectus. Dr. Tarbox and Gordon.

PEARLS BOUGHT FOR CASH

If a customer should bring you any Diamond Jewelry or any Pearls to sell, and you do not care to buy them yourself, send them to

CHAS. S. CROSSMAN & CO.
3 Maiden Lane, New York
where you can have an immediate **Cash Offer**
Established 1880

Repairing For the Trade
of Complicated and Ordinary Watches, Wheel and Pinion Cutting, Demagnetizing, etc., *carefully* and *promptly* done by an *expert*.
A. JETTE
Established 1899 Lancaster, Pa.

WANTED

Salesmen on commission to sell Cut Glass for a leading manufacturer in each State, Middle-West, Southwest, New York. Men having jewelry line preferred, to take advantage of the present season. Correspond immediately with "D 405," care The Keystone

High-Class
Repairing
for the Trade
Our work is the kind you call your own
L. E. WINSLOW
35-37 East Randolph Street, CHICAGO, ILL.

GOOD POSITIONS

On an average we receive twenty-five offers of good positions for each workman we can supply. Even as we write, one firm in United States asks us for four good workmen. Send for circulars.

Canadian Horological Institute
H. R. PLAYTNER, DIRECTOR
115 East King Street
Toronto, Ont.

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Sickles & Sons, M. . . . 1597
Simons, Bro. & Co. . . . 1648
Simmons Company, R. F. . . . 1652
Sippel, Theo. A. . . . 1656 *h*
Sommer Clock Mfg. Co. . . . 1692
South Bend College of Optics, The . . . 1690
Spencer Optical Company . . . 1684
Stahl, Jr., Chas. A. . . . 1700
Standard Optical Co., The . . . 1684
Steiner, Louis . . . 1700
Stein & Ellbogen Company . . . 1642
Sternan & Co., S. . . . 1644
Stern, M. E. . . . 1676
Stern & Co., Louis . . . 1510
Stilwell, L. W. . . . 1692
St. Louis Clock and Silver Ware Co. . . . 1520 *e*
St. Louis Watchmaking School . . . 1520
Stone's School of Watchmaking . . . 1699
Strauss & Co., Ignaz . . . 1698
Superior Mfg. Co. . . . 1527
Sussfeld, Lorsch & Co. . . . 1517, 1533
Swartchild & Company . . . 1523
Swigart, E. & J. . . . 1508
Thomas Clock Co., Seth . . . 1619
Thompson, W. T. . . . 1558
Thrasher Time System, The . . . 1618
Trenton Watch Co. . . . 1614
Trout & Co., Chas. L. . . . 1559
Union Show Case Co. . . . 1626
United States Watch Co. . . . 1534
U. S. Electro-Chemical Co. . . . 1646

Vogeley & Lackman . . . 1520 *h*

Wadsworth, G. F. . . . 1699
Wallace & Sons Mfg. Co., R. . . . 1571
Wallis, P. A. . . . 1692
Waltham Clock Co. . . . 1654
Waltham Horological School . . . 1529
Warner & Swasey Co., The . . . 1664
Webster-Whitcomb Lathes . . . 1517
Weidlich & Brother, Wm. . . . 1646
Weil & Sons, L. . . . 1529
Wells, Chester . . . 1698
Wendell & Co. . . . 1518, 1519, 1560, 1612, 1630
Wheeler & Co., Hayden W. . . . 1540
White & Co., N. H. . . . 1554
Wightman & Hough Co. . . . 1644
Wilby & Weller . . . 1697
Williams Silver Co., Roger . . . 1569
Willson & Co., T. A. . . . 1525
Winslow, L. E. . . . 1703
Winter Lumber Company, M. . . . 1521
Witsenhausen, L. . . . 1520 *b*
Wood & Sons, J. R. . . . 1704
Worcester & Glendore . . . 1696
Young & Co., Otto . . . 1578
Young & Co., O. W. . . . 1656 *h*

Zimmern & Co., Henry . . . 1520

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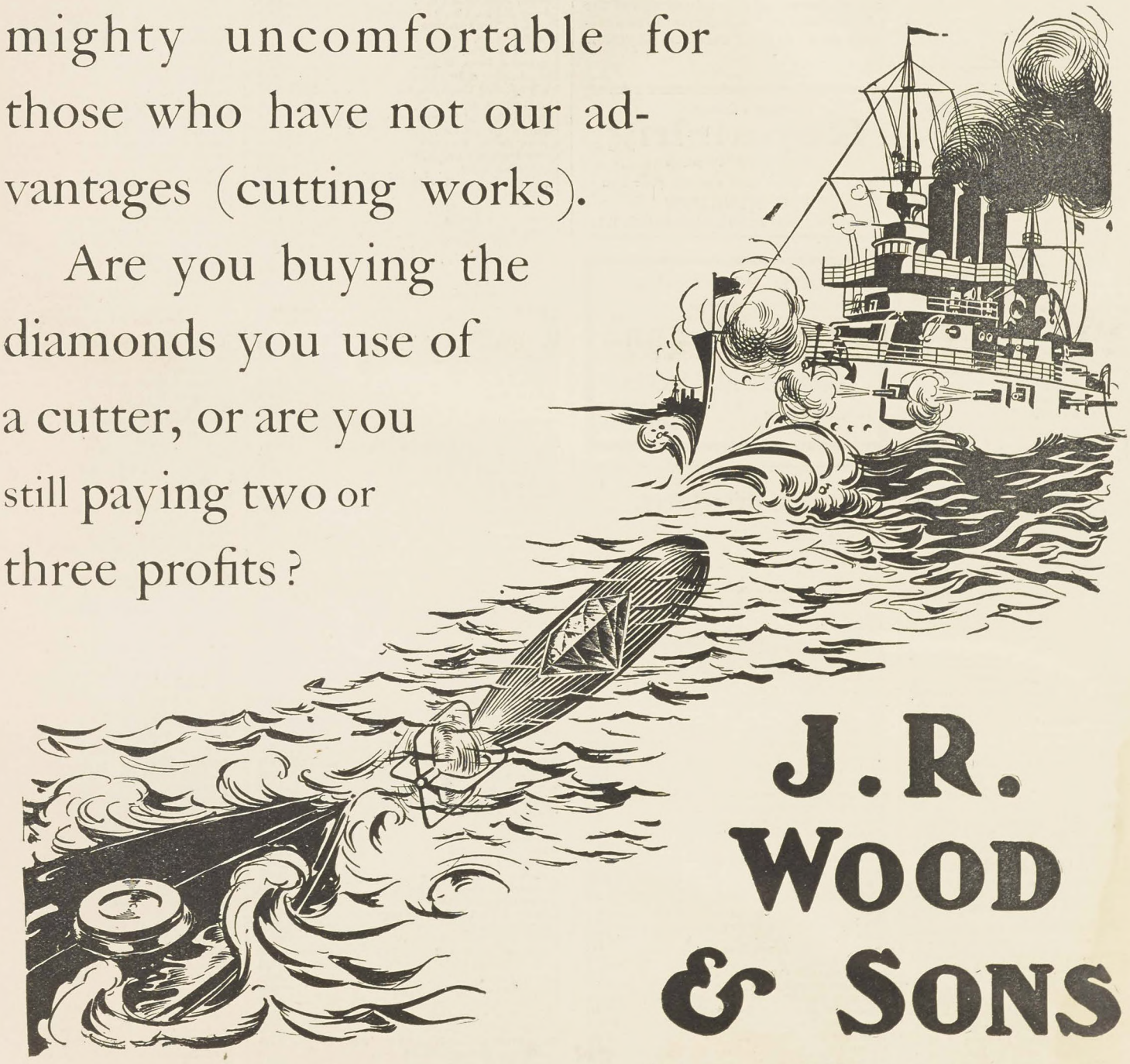

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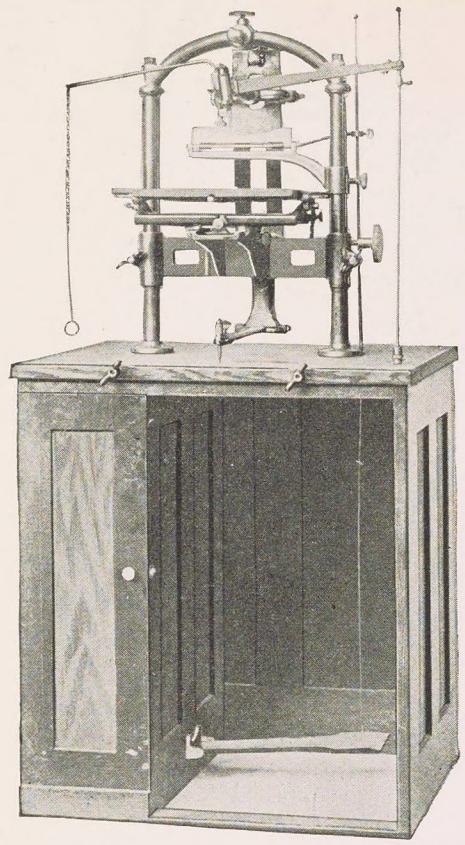

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